

AI G R A B O O K

Teaching, Learning and
Designing with Generative AI

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Kutztown University LLM Prompt Cookbook

Generative AI Recipes for Teaching & Learning

Welcome to the KU AI Faculty Cookbook!

This cookbook was developed to help Kutztown University faculty members to confidently experiment with generative AI tools in their teaching. Whether you're designing a new course or revising a single assignment, this cookbook is packed with recipes—step-by-step, classroom-tested use cases—to help you integrate tools like ChatGPT, Claude, Copilot, and others into your planning, teaching, and feedback practices.

Just like a community cookbook, this one includes our favorites, swap-outs, tips, and inspiration. Each section is structured around the principles of backward design, UDL, and the ethical, inclusive use of AI.

Let's cook with curiosity.

Dr. Carl J. Sheperis
Vice Provost & Chair, KU Artificial Intelligence Taskforce

Preface

In recent years, artificial intelligence (AI) has surged into higher education, bringing both exciting opportunities and pressing ethical questions. In 2022, the White House Office of Science and Technology Policy published a *Blueprint for an AI Bill of Rights* outlining five guiding principles for ethical use of AI. In response, universities, including Kutztown University, have developed policies to ensure AI is used responsibly. Kutztown's Artificial Intelligence Acceptable Use Policy establishes a framework for ethical use of AI aligned with the university's commitment to academic integrity, respect, privacy, and innovation. This cookbook is designed to help faculty harness the power of large language models (LLMs) and other generative AI tools in teaching and learning—safely, effectively, and in line with these principles and policies.

This Prompt Cookbook was inspired by the University of Florida's *AI Prompt Cookbook* (Sharp & Mojeiko, 2023) and expanded for the Kutztown University context. It takes a playful “teaching kitchen” approach, presenting prompt-writing techniques and examples as recipes. The chapters are structured like a multi-course meal, corresponding to stages of course design and delivery (a nod to backward design principles as described by the University of Illinois Chicago's Center for Teaching Excellence): we begin with planning learning outcomes and assessments, then move through engaging activities and support strategies, and finally address challenges and advanced applications. Throughout, the tone is practical and conversational—you'll find we speak to you as fellow educators exploring these new tools together. We hope this guide will spark your creativity, demystify AI tools, and empower you to enhance student learning while upholding our shared values of inclusion and integrity.

Acknowledgements

We extend our gratitude to the instructional design team at the University of Florida's Center for Instructional Technology & Training for their pioneering work on the original *AI Prompt Cookbook*, released under a Creative Commons BY-NC-SA license. Their work provided a foundation that we have built upon for the Kutztown University community. We also thank the KU Artificial Intelligence Taskforce and the faculty early adopters who contributed ideas, tried out “recipes,” and offered feedback. Your collaboration and insight have enriched this cookbook.

Glossary of AI & Instructional Terms

- **Generative AI:** A type of artificial intelligence that can create new content (text, images, music, etc.) by learning patterns from existing data. For example, ChatGPT can generate essays or answers by drawing on patterns in its training data.
- **Large Language Model (LLM):** An AI model (often based on neural networks) trained on a massive corpus of text. It generates human-like language responses by predicting likely sequences of words. ChatGPT, GPT-4, and similar models are LLMs.
- **Prompt (Prompt Engineering):** The input or instruction given to an AI model to elicit a response. Effective prompt engineering means crafting this input clearly to guide the AI to produce useful results.
- **AI Hallucination:** When an AI model produces an output that is factually incorrect or nonsensical, even though it may sound plausible. Hallucinations occur because the AI is generating text based on patterns rather than verifying facts.
- **AI Bias:** Systematic inaccuracies or unfair tendencies in AI output that reflect biases in the training data. For example, an AI might generate stereotypical descriptions or skewed information if those patterns existed in what it learned.
- **Backward Design:** An instructional design approach where you start by defining desired learning outcomes, then plan assessments, and finally design learning activities. (In our “menu” metaphor, planning the end goal of the “meal” before the ingredients and cooking method.)
- **Authentic Assessment:** An assessment that asks students to apply skills and knowledge to real-world scenarios or complex problems, rather than just recalling facts. It is “authentic” because it mirrors challenges outside the classroom.

- **Universal Design for Learning (UDL):** An educational framework for designing curriculum and instruction that is accessible and effective for all students, with multiple ways of engagement, representation, and expression. UDL principles aim to remove barriers to learning.
- **Transparency in Learning and Teaching (TILT):** A framework emphasizing clear communication to students about the purpose, task, and criteria of assignments. “TILTing” an assignment means being explicit about why students are doing it, what exactly they must do, and how it will be evaluated. This clarity can be incorporated into prompts and AI-generated materials to ensure students understand expectations.

How to Use This Cookbook

This cookbook is organized into sections like courses of a meal. You can read it sequentially or jump to the section that meets your immediate need – each “recipe” stands on its own. We suggest starting with the **Test Kitchen** to get comfortable with AI, then moving to **Menu Planning** (course design) and through the “meal” of teaching strategies. Each recipe follows a consistent format with clear headings and icons:

-  **Recipe Name:** The title and theme of the AI teaching strategy.
- **Preparation:** A quick intro to the context and purpose of the recipe.
-  **Prompt Ingredients:** Key information or constraints to include in your AI prompt (e.g. course level, topic).
- **Try this prompt:** A template prompt you can copy, adapt, and use. Placeholders like [your topic here] indicate where to insert your specifics.
- **Example Output:** A sample of what the AI might generate, so you know what to expect.
- **Cleanup:** (For many recipes) Suggestions for reviewing or refining the AI-generated content to ensure it meets your needs (accuracy, inclusivity, etc.).
-  **Tweak-It Tips:** (Adaptability Options)
-  **Chef's Notes:** (Pedagogical Insight)

Feel free to copy and paste the prompts as a starting point and adjust them to fit your course. Keep in mind that AI outputs are **not deterministic** – results may vary. That’s part of the fun! Like tweaking a recipe to taste, you can iterate and refine prompts to get better results. Don’t be afraid to experiment in this “kitchen.”

Chapter 1: Introduction to LLMs and Generative AI

Large Language Models (LLMs) are advanced AI systems trained on massive amounts of text data to generate human-like language. They belong to the broader category of generative AI, which refers to AI capable of producing content – whether text, images, music, or code. The emergence of powerful generative AI tools like ChatGPT (built on OpenAI’s GPT series of LLMs) represents a major leap forward in technology, bringing exciting opportunities and complex challenges.

In essence, an LLM predicts and constructs text based on patterns it learned during training. For example, when you prompt ChatGPT with a question or task, it generates a response by statistically predicting plausible sentences. This capability means LLMs can draft paragraphs, answer questions, summarize documents, translate languages, and even engage in dialogue. However, it’s important to remember that LLMs do not “think” or truly understand – they produce outputs based on probability, not conscious reasoning. As a result, they may sometimes produce incorrect information (known as “*hallucinations*”) or exhibit biases present in their training data.

Why Faculty Should Care. Generative AI tools have rapidly become part of the higher education landscape. Students are experimenting with them, and faculty can leverage them to streamline their own work. From drafting emails and lesson plans to generating ideas for exam questions, LLMs can serve as a creative partner or an “assistant.” This handbook will guide you in using these tools effectively and responsibly. We’ll cover best practices for integrating AI into your teaching and administrative tasks while upholding Kutztown University’s academic standards and policies. By understanding how LLMs work and their limitations, you can take advantage of their capabilities—for instance, producing better results from well-crafted prompts—to enhance productivity in course design, grading, research, and more.

In the sections that follow, we introduce guidelines and examples for using AI in common faculty tasks. The tone is conversational and practical, as if you have a colleague by your side explaining how to get the most out of these new AI tools. At the end of each section in our teaching “menu,” we include prompt recipes that guide you through generating useful outputs for your work as a faculty member. Let’s dive in!

Best Practices for Using AI in Higher Education

Using AI in academia comes with a learning curve and ethical considerations. Here are some best practices and guiding principles for faculty to ensure AI is used effectively, ethically, and in alignment with KU values:

- **Augment, Don't Replace:** Treat AI as an assistant, not a replacement for your own expertise or judgment. The KU Acceptable Use Policy emphasizes that AI should *"augment human decision-making processes"* and not supplant essential human roles. For example, an AI might draft an email or suggest quiz questions, but **you** should review and refine those outputs. Human oversight remains crucial.
- **Double-Check Everything:** Always verify the accuracy and quality of AI-generated content. AI technologies are not always accurate or up to date, so users are responsible for reviewing and correcting AI output before use. This is especially true for factual information (dates, figures, references), which can occasionally be wrong or fabricated. If an AI writes a summary of a journal article, read the article yourself to ensure the summary is correct. If it generates a quiz question, make sure the question (and answer) is valid. In short: trust but verify.
- **Be Specific and Provide Context:** The quality of an AI's output depends largely on the input you give it. A common saying is "garbage in, garbage out." When using AI for any task, provide clear context, objectives, and constraints in your prompt. (We'll cover detailed prompt crafting tips in the next chapter.) In practice, this means if you want a set of exam questions, mention the topic, difficulty level, format (multiple-choice vs. short answer), etc. Well-structured prompts lead to more relevant and useful results.
- **Maintain Academic Integrity:** Ensure AI use does not facilitate cheating or diminish student learning. For instance, avoid using AI in ways that would give some students an unfair advantage or defeat the purpose of an assignment. Many faculty are justifiably concerned that generative AI tools could enable "shortcut" behaviors. However, when used thoughtfully, AI can also enhance learning – for example, by generating practice problems or by serving as a tutor that asks students probing questions. The key is to integrate AI in a way that upholds the spirit of your learning objectives. (Later in this guide, we'll discuss strategies for guiding students on acceptable AI use.)
- **Transparency with Students and Colleagues:** Be open when you use AI in your academic work or decision-making. If you use an AI tool to help draft a syllabus or write a recommendation letter, it's good practice to acknowledge that assistance, at least internally or in an appendix/note. For student-facing content, transparency builds trust. KU policy states that users *"must be transparent about the use of AI technologies, including informing individuals when they are interacting with or being affected by AI systems."* In a classroom context, this might mean telling your students if an AI helped generate a practice quiz, or if you're using an AI-driven system to check for originality. Being transparent also models ethical behavior for students, who may be unsure about whether or how to disclose their own AI use.
- **Beware of Bias and Fairness:** AI models can inadvertently produce biased or culturally insensitive content, because they learn from vast internet data that contains stereotypes and biases. Use a critical eye to evaluate AI outputs for any bias, especially

in sensitive tasks (like drafting a letter of recommendation or formulating scholarship criteria). As the policy notes, *“AI technologies must be used in a manner that respects the rights and dignity of all individuals,”* and users should avoid actions that introduce bias or discrimination. Practically, this means checking that an AI-generated document does not, for example, use gendered language inappropriately or make unfounded assumptions about a person’s background. If biases are spotted, adjust your prompt or the content to correct them.

- **Data Privacy First:** Only use AI tools in ways that protect student and institutional data. Never upload sensitive information (like student grades, personal identifiers, or unpublished research data) into a public AI service. Ensure any AI tool you use has been vetted or approved for the type of data you’re handling. For instance, even if you’re using Microsoft’s Bing Chat or OpenAI’s ChatGPT, you **should not** input raw student records or other confidential information. Always follow FERPA and university guidelines when it comes to data privacy and security.

Ethics & Academic Integrity

Using AI in academia requires a strong ethical compass. Faculty must model and enforce integrity when integrating AI into teaching. Both institutional policies and our responsibility as educators demand that we use these tools in a fair, transparent, and learning-focused manner.

Some key ethical guidelines to consider:

- **Transparency and Attribution:** Both faculty and students should be transparent when AI has been used. The university’s policy requires informing individuals when AI is involved in creating content or decisions. If you use AI to help write course materials or if students use AI in assignments, make sure that use is disclosed (for example, a note in a syllabus or an assignment stating “Portions of this work were generated with AI assistance”). This ensures honesty and maintains trust in the learning environment.
- **Privacy & Data Protection:** Protect personal and sensitive data. As noted above, never share confidential student information or proprietary materials with an AI service that isn’t approved for such data. If an AI tool requires a login or data upload, ensure it complies with the university’s privacy guidelines. It’s better to err on the side of caution – for instance, anonymize student data or use dummy data when testing AI tools for class.
- **Fair Usage & Equity:** Ensure that AI tools do not introduce unfair advantages. If you allow or encourage students to use AI for certain tasks, consider accessibility – does every student have equal access to the technology? Also, be clear about when AI use is permitted versus when work should be entirely the student’s own. This clarity will help

maintain academic integrity. If some students use AI to generate work without permission, that will violate our academic integrity standards.

By proactively addressing these ethical considerations, you help set the tone for responsible AI use. Discuss these topics with students as well – for example, have a conversation about the ethical implications of AI at the start of the course or when introducing an AI-based assignment. Making ethics part of the conversation will empower students to use AI thoughtfully and within the bounds of academic honesty.

In summary, ethical use of AI in education revolves around **transparency, fairness, and responsibility**. By adhering to Kutztown's guidelines and the principles outlined in frameworks like the AI Bill of Rights, we can integrate AI in a way that enhances learning while upholding our core academic values. Always remember, as educators, we set the example. Using AI ethically in our teaching practice helps students learn to use these tools responsibly as well.

Chapter 2: KU's AI Test Kitchen

Getting Comfortable with AI Tools and Prompt Writing

Before we get into formal lesson planning and activities, it's important to familiarize yourself with generative AI in a low-stakes, exploratory way. Think of this chapter as your **AI Test Kitchen**, where you can play with the ingredients (AI tools and prompts) without fear of "ruining" the meal. In this safe sandbox, you'll experiment with prompts and observe how the AI responds, building your intuition for what makes an effective prompt.

One great way to start is by using AI for some everyday faculty tasks. Below are several sample prompts and outputs for common faculty tasks. Trying these will give you a sense of AI's capabilities and limitations and help you develop comfort with these tools. Remember, the goal here is to explore and learn – so have fun mixing things up!

Prompt Experiment 1: Create a Quiz Question – Ask the AI to draft a quiz question on a topic you know well. For example, you might prompt: *"Create a multiple-choice question about the causes of the American Civil War, with four answer options and indicate the correct answer."* When the AI gives you a question, evaluate it critically: Is it accurate? Is it appropriately challenging for your students? Does it align with what you taught? Through this, you'll see that while AI can generate quiz questions quickly, you often need to fact-check and tweak them for precision.

Prompt Experiment 2: Simplify a Complex Idea – Provide the AI with a passage from an academic text or a complex concept from your lecture and ask it to explain the idea in simple terms (perhaps at a freshman level). For instance: *"Explain the concept of opportunity cost in simple terms that a high school student could understand."* Observe how the AI breaks down the concept. Is the explanation accurate and clear? This exercise shows how AI might help create study guides or clarify content for students, but also where it might oversimplify or miss nuances.

Now that you've tried a couple of quick prompt experiments, consider some real-world scenarios:

- **Scenario A: Email to Students** – Imagine you need to write a friendly reminder email to your class about an upcoming exam. You might prompt the AI with some details: *"Draft a brief, encouraging email reminding my Introduction to Psychology class about our exam next Wednesday. Include the date/time, chapters covered, a few study tips, and an encouraging tone."*

Output (AI-generated draft):

"Hello class! Just a reminder that we have an exam coming up on **Wednesday, March 15 at 10:00 AM** in our usual classroom. The exam will cover Chapters 1 through 6 from our textbook, including all topics we've discussed in lectures (from the basics of psychology to the end of the learning chapter).

A few tips as you prepare:

- Review your lecture notes and the key terms at the end of each chapter.
- Don't forget our review session on March 13 – it's a great chance to ask last-minute questions.
- Make sure to get a good night's sleep before the exam!

You've all been working hard, and I know you've got this. I believe in each of you – you're going to do great. Keep up the good studying and see you in class!

Best,

[Your Name]"

In this draft, notice that the AI correctly included key details (date/time, chapters, tips) and a supportive tone. It reads like something you might write on a good day when you have time to be thorough – which is great, because on a busy day, the AI can help generate a solid first draft. You would still need to double-check that all details (date, chapters) are correct and then send it out.

- **Scenario B: Email to a Colleague or Administrator** – Now, suppose you need to email your department chair about something sensitive or formal. AI can help draft a professional tone if you provide the right instructions. For example: *"Draft a polite email to my department chair, Dr. Smith, requesting a meeting to discuss the possibility of offering a new elective course. Mention my availability next week and briefly outline the topic of the course."* The AI might produce a draft that you can then refine to accurately reflect your intentions and style. Always remember to fact-check and personalize AI-generated communications but notice how it can save you time by providing a well-structured starting point.

Through scenarios like these, the Test Kitchen lets you compare AI's output to your own expectations. Try giving the AI a task, review what it generates, and adjust the prompt if needed. You'll quickly see that the way you phrase a question or assignment for the AI can drastically change the result. This hands-on experimentation is key to becoming a savvy AI user.

A few more ideas to play with in the Test Kitchen:

- **Brainstorming Teaching Ideas:** Prompt the AI for ideas on engaging your students. For example, *"List three creative in-class activities to help students understand [a concept in*

your course]. You might get some suggestions that spark your creativity (and a few that you'll laugh off). It's a fast way to generate a list of possibilities.

- **Syllabus Tone Check:** If you provide a section of your syllabus and ask the AI to suggest a more student-friendly wording, what does it come up with? Perhaps try: *"Here is a paragraph from my syllabus on late work. Can you make the tone more encouraging while still enforcing the policy?"* The AI's suggestion might show a different tone that you can adapt if you like it.
- **Summarizing Research:** Input a long paragraph from an academic article or report and ask the AI to summarize it in a few sentences. This can test how well the AI captures main points—and reveal if it misses critical details (a common issue). It's a reminder that while AI can save time in processing information, we need to verify summaries for completeness and accuracy.

Take some time in this chapter to try a variety of prompts. The goal is to become comfortable both with what AI can do and where it may stumble. By treating the AI as a learning partner in this experimental phase, you'll develop a sense for effective prompt strategies that we'll apply in later chapters for specific teaching tasks.

Remember: in this Test Kitchen, there's no such thing as a failed experiment—only learning opportunities. If an AI-generated result is off-target or incorrect, consider it a chance to refine your input. Just as a recipe might need a pinch more salt, a prompt might need a bit more detail or a different approach. Enjoy the process of discovery here. Bon appétit in the Test Kitchen!

Chapter 3: Menu Planning

Course Design and Syllabi Creation

In backward design, the first step is identifying what we want students to learn – the Student Learning Outcomes (SLOs) or course goals. This chapter, “**Menu Planning**,” focuses on using AI to help craft clear, measurable learning outcomes and goals for your courses. Just as a chef plans a menu before cooking, an instructor plans learning outcomes before developing activities and assessments. AI can serve as a brainstorming partner during this planning stage, helping you refine wording, ensure alignment with standards (such as Bloom’s Taxonomy), and even generate ideas for outcomes you might not have considered.

Crafting better outcomes with AI can make a sometimes-tedious task easier. Well-written SLOs guide your assessments and teaching strategies. Generative AI can rapidly generate lists of potential learning objectives given some information about your course. For example, you can feed the AI a general course goal or a topic outline and ask it to propose specific outcomes for each module or unit. It’s a bit like having a curriculum assistant on call 24/7. You might input: *“I’m designing an introductory marketing course. Give me 5 learning outcomes that use action verbs and reflect different levels of Bloom’s Taxonomy.”* The AI could output something like:

1. **Explain** the core concepts of the 4 Ps of marketing (Knowledge level).
2. **Analyze** a company’s marketing strategy to identify its strengths and weaknesses (Analysis level).
3. **Design** a basic marketing plan for a hypothetical product (Synthesis level).
4. **Evaluate** the effectiveness of a social media campaign using specific metrics (Evaluation level).
5. **Apply** market segmentation principles to identify a target audience for a new product (Application level).

From there, you can pick, edit, or combine the suggestions. These draft outcomes come with strong action verbs and clearly tie back to broad course goals. Of course, you should review and revise them as needed – for accuracy, appropriate difficulty, and phrasing. Not every AI-suggested outcome will be perfect, but they can help you avoid the “blank page” syndrome and spark ideas.

One powerful approach is to explicitly include taxonomy levels or specific criteria in your prompt. For instance, try a prompt in this format (feel free to copy and adjust):

- “*Write [number] student learning outcomes for a [course level/type] course on [topic]. Use [desired Bloom’s level] verbs and ensure each objective aligns with the broader course goal of [insert course goal].*”

For example, if you are teaching a Biology course and one of your course goals is “Understand fundamental genetic principles,” you could prompt: *“Write 3 student learning outcomes at the*

Application level of Bloom's Taxonomy for an intro biology module on Genetics. Align them to the course goal: 'Students will understand fundamental genetic principles.'" The AI might generate objectives such as:

- **Apply** Mendel's laws of inheritance to predict the outcome of genetic crosses.
- **Illustrate** how mutations in DNA can lead to changes in protein function and describe potential effects on an organism's traits.
- **Use** principles of population genetics to calculate how allele frequencies change in a given scenario.

Again, these are draft outcomes – they have strong action verbs (“apply,” “illustrate,” “use”) and seem aligned to the general goal. You would then refine specifics (ensure the scope is right for your course, maybe add condition criteria, etc.). The AI saved you from starting from scratch, but you'll fine-tune the final wording.

Another way AI can assist in course design is by helping ensure alignment between outcomes and assessments. You could ask the AI for ideas on assessments that match each outcome. For instance: *“For the outcome ‘Apply Mendel’s laws to predict genetic cross outcomes,’ suggest an authentic assessment method.”* The AI might propose: “Have students conduct a virtual genetics experiment crossing pea plants and write a report predicting outcomes for successive generations.” This could be a useful idea to consider or tweak.

As you refine your course outcomes, keep in mind the principles of alignment and feasibility. AI can generate grand-sounding outcomes, so you might also prompt it to be realistic: *“Propose 2 learning outcomes for a freshman-level history course on World War II that are achievable in one semester.”* This helps ensure the goals are appropriate to the level and time frame.

At this stage, we're planning the *menu* of the course – deciding on the overarching goals and outcomes. Once you have those, we can move on to developing the assessments and activities (the “recipes”) to achieve them, which we'll do in upcoming chapters.

Before moving on, consider using AI to help draft parts of your syllabus as well. For example, try having it generate a course description or course policy text, then edit to fit your needs. AI can offer a formal tone or a student-friendly rephrasing, depending on what you ask for. Just be sure to verify that any policy statements align with KU's official policies.

With clear outcomes in hand, you've set the stage. You know what's on the menu; next we'll think about appetizers – those first-day activities to engage students. But first, let's solidify these planning ideas with some concrete AI “recipes.”

Menu Planning – Expanded Section

Below are sample recipes that can help you generate and refine course design elements. Each recipe is designed to help you infuse AI into the early stages of course planning, from defining goals to outlining content.

Creating Course Goals

Preparation: All recipes in this section build upon one another to generate ideas for a course map. This is the first recipe that will help align program outcomes and course goals. Prepare by gathering your ingredients below before you cook with generative AI!

 **Prompt Ingredients:** Here are some things you might use when using generative AI to create course goals:

- The student level of your course (e.g., undergraduate freshman, graduate seminar, etc.).
- A list of key course topics or units.
- Program-level outcomes that your course should align with (often found in your department's curriculum or Academic Learning Compact).

Now, try this prompt in an LLM tool:

I am developing a [student level] college course on [course topics] that needs to align with the following program outcomes: [program outcomes]. Based on this, write 5–7 course goals for the course that align with the program outcomes.

These course goals should be broad statements of what students will achieve by the end of the course.

Cleanup: After the AI generates a list of course goals, review them. Do they align well with the program outcomes provided? Adjust any goals to ensure they are neither too narrow (which would make them more like specific objectives) nor too broad to be meaningful. Check that each goal starts with a measurable verb to ensure you can later assess it. By the end of cleanup, you should have a solid set of course goals to include in your syllabus and use to guide your assessment planning.

Defining Modules

Preparation: Have your course goals handy before creating module titles and objectives. Consider how your course might logically break down into modules or units (weeks, chapters, themes). The goal here is to generate ideas for module-level outcomes or topics that ladder up to your overall course goals.

 **Prompt Ingredients:**

- A list of your course goals (from the previous recipe).

- The number of modules or weeks in your course, or at least a rough sense (e.g., a 15-week semester might have 5 three-week units, etc.).
- Any key themes or chronological structure for the content (e.g., historical periods, scientific processes).

Now, **try this prompt:**

Using the course goals [list or summary of goals], propose a set of [number] module titles for this course and a brief objective for each module.

For example, you might prompt: *“Using the 5 course goals we’ve established for Intro to Marketing, suggest 5 module titles (units) and give one sentence on what each module will cover or aim to achieve.”*

The AI may generate something like:

- Module 1: Basics of Marketing – *Objective: Students will understand the 4 Ps and fundamental concepts of marketing.*
- Module 2: Market Research – *Objective: Students will learn how to gather and analyze market data to inform strategy.*
- Module 3: Consumer Behavior – *Objective: Explore factors that influence consumer decisions and how marketers respond.*
- Module 4: Digital Marketing Strategies – *Objective: Apply marketing principles in online and social media contexts.*
- Module 5: Campaign Creation – *Objective: Synthesize learning to design and pitch a comprehensive marketing campaign.*

Cleanup: Check that the module breakdown makes sense sequentially and that all course goals are addressed across the modules. You might shuffle module topics or merge/split ideas. Ensure the wording of each module objective aligns with the style of your other materials. By the end, you should have a coherent course structure that you can expand on when creating lessons and assignments.

By using AI as a brainstorming partner for course design, you generated course goals and a possible modular structure in a fraction of the time it might normally take. Remember to infuse your personal expertise and context into these AI suggestions – the technology provides a starting point, but you know your course and students best.

Chapter 4: Soups & Salads

Active Learning, Collaboration, UDL & Inclusion

Now that the class is warmed up, it's time to sustain engagement and ensure all students can participate meaningfully. The "Soups & Salads" course in our menu corresponds to active learning and inclusive teaching strategies – the hearty, nourishing activities that keep students involved day-to-day. In this chapter, we explore how AI can help design and enhance these activities, making your class more interactive and inclusive.

AI as a brainstorming partner for active learning. Active learning encompasses any activity where students *do* something and reflect on what they're doing, rather than passively listening. It can include discussions, problem-solving, case studies, group work, and more. Sometimes, instructors need fresh ideas for these activities, especially if you're teaching the same material repeatedly or want to try something new. AI can generate a plethora of active learning ideas on demand.

For example, you might ask: *"Give me an active learning exercise for an online introductory economics class to teach the concept of supply and demand."* The AI might propose: *"Conduct a mock market: half the class are buyers; half are sellers of an imaginary product. Have them negotiate prices for several rounds, then discuss how prices changed and why – illustrating equilibrium."* This suggestion is a fully fleshed-out exercise – effectively an in-class simulation – that not only gets everyone involved but directly illustrates the target concept. AI can generate such scenarios for many topics, which you can then adapt to your class size or modality.

Active learning prompts often benefit from specifying the class setting. For instance, if you want a small-group activity, mention that in your prompt: *"Suggest a collaborative project for a mid-level Biology class (~30 students) that can be completed in one class period, focused on cellular respiration."* Including details like *"for a class of 30 students"* or *"in an online course"* helps the AI tailor the idea (e.g., suggesting breakout groups for an online course). The more context you give, the more practical the idea tends to be.

Collaboration and Universal Design for Learning (UDL). Active learning should involve all students, not just the bold or quick ones. Universal Design for Learning reminds us to provide multiple ways for students to engage. AI can assist in brainstorming inclusive variations of activities. For example, you could prompt: *"How can I modify a standard think-pair-share activity on [topic] to make it more inclusive for students who are shy or need more time to process?"* The AI might answer with ideas like: *"Allow writing or drawing during the 'think' phase or use an online discussion board for the 'share' phase to give everyone a chance to voice their thoughts."* These are strategies you might already know, but AI can put a list of them at your fingertips quickly.

Similarly, you might have the AI generate case examples or scenarios that include diverse perspectives, which can help ensure representation. For instance: *“Provide an example case study about a historical event that includes multiple cultural perspectives, for use in a class discussion.”* The AI might produce a scenario in which students must examine an event from the perspectives of different groups. Always review AI-generated content for accuracy and sensitivity and note how it can help ensure you consider a variety of angles.

Examples across disciplines. Let’s showcase a couple of AI-aided ideas in different fields:

- *Business (Marketing):* Prompt – “I want a small-group activity to teach marketing students about branding. It should be interactive and last about 20 minutes.” The AI suggests a “brand redesign” challenge: groups take an existing product and quickly sketch a new branding (name, slogan, target audience) then share. This can prompt discussion on brand identity.
- *STEM (Chemistry):* Prompt – “Suggest a quick in-class demo or participatory activity to illustrate the concept of pH to non-science majors.” The AI proposes a virtual lab simulation where students “mix” household substances and predict pH, or a human pH scale activity where students position themselves along a line from acidic to basic based on assigned substances.
- *Humanities (Literature):* Prompt – “Generate an idea for a think-pair-share discussion in a literature class reading *To Kill a Mockingbird*, focusing on perspective.” The AI responds: “Think: Write a few sentences from Boo Radley’s perspective about events in the story. Pair: Share with a partner and discuss differences in perspective. Share: Volunteers read their pieces, leading to a full class discussion on narrative perspective and empathy.” This gives students who might not typically speak a structured opportunity to contribute creatively.

By asking AI for active learning ideas across different fields, you can quickly gather a repository of techniques and activities. Not every idea will be a winner, but even an imperfect suggestion can often be tweaked into something workable.

Finally, consider using AI live in class as part of active learning. For example, you might do a “human vs. AI” debate: split the class to argue one side of an issue, and have the AI (via a projected screen) argue the other side. Students can then critique the AI’s arguments – a modern twist on debate that also builds critical thinking about AI.

With AI’s help, you’ll never run out of ideas for engaging exercises, and you can devote more energy to facilitating and tailoring those exercises to your students.

Soups & Salads – Expanded Section

Below are sample recipes that can be used to sustain engagement and foster inclusion. Each recipe helps you design interactive learning activities, often with a focus on collaboration and universal design.

Designing Active Learning Activities

Preparation: Active learning strategies increase engagement and deepen student understanding through participation and reflection. In this recipe, we'll have AI assist in creating a set of active learning exercise ideas tailored to your subject and class context.

Ingredients:

- A clear goal for the activity (e.g., practice applying a concept, analyzing a case, debating an issue).
- Information about your class context: subject, class size or format (in-person or online), and any constraints (time available, materials).
- Any specific requirements for the activity (e.g., must involve group discussion, or must produce a written result).

Try this prompt in an LLM tool:

“Generate three ideas for active learning activities in a [discipline] class to help students [insert cognitive goal—e.g., apply the concept, analyze a scenario, evaluate a position]. Provide brief setup instructions for each and indicate which would work best for [in-person/online, small or large class].”

For example: *“Generate three ideas for active learning activities in a psychology class to help students apply theories of motivation. Provide brief setup instructions for each and indicate which would work best for an in-person class of 40 students.”*

Example Active Learning Chat:

- **“Case Study Role-Play:** Give groups a brief case describing a person in a workplace. Each group role-plays as that person’s manager applying a different motivation theory (e.g., Maslow’s hierarchy, self-determination theory) to encourage the person. After 10 minutes, groups explain which actions they chose and why. (Best for in-person, works with 5 groups of 8 students.)”
- **“Motivation Mythbusters (Think-Pair-Share):** Students individually list common beliefs about what motivates people (think). Pairs discuss and connect each belief to or against

a theory learned in class (pair). Then the class discusses which beliefs are supported by theory or research (share). (Adaptable to online or in-person, any size by scaling pair groups.)”

- **“Quick Design Challenge:** In small groups, students design a 5-minute motivational plan for a hypothetical scenario (e.g., unmotivated student, demoralized employee) using assigned theories. Each group presents their plan briefly. (Works in-person or online breakout rooms, ideal for 30-50 students split into groups of 5).”

Cleanup: Review the AI-suggested activities and choose one or two that best fit your lesson and students. Tweak the details: ensure the context matches what your students know, adjust group sizes or timing as needed, and prepare any materials. Double-check that instructions are clear and that the activity aligns with your learning objective (e.g., if the goal was to *apply* a theory, the activity indeed makes students do that). With a bit of fine-tuning, you have an active learning recipe ready to serve!

Creating Inclusive Think-Pair-Share Prompts

Preparation: Think-Pair-Share (TPS) is a classic active learning strategy that fosters participation and reflection. With AI, you can generate course-specific TPS prompts that are inclusive, open-ended, and aligned to learning objectives. Inclusive TPS prompts consider that some students might not be comfortable speaking spontaneously or might prefer visual expression.

Prompt Ingredients:

- A topic or concept students will discuss.
- The learning objective for the discussion (e.g., analyze a concept, relate to personal experience, practice a skill).
- Any accommodations or variations you want to include (like allowing written or drawn responses).

Try this prompt:

“Propose a think-pair-share question for [topic]. Make it inclusive for students who may be shy or need more time. Provide one version with a sentence starter and one option for a visual response.”

For example: “*Propose a think-pair-share question for a history class on the causes of World War I. Make it inclusive for students who are shy. Provide a sentence starter and a way to respond visually.*”

Example TPS Chat:

- **Prompt:** “Think about the most significant cause of World War I from the perspective of one country. Complete this sentence: ‘One important cause of WWI was... because...’. (If you prefer, you can draw a simple concept map instead of writing.)”

This prompt includes a sentence starter to lower the barrier for hesitant students and allows drawing a concept map for those who express ideas better visually.

Cleanup: Ensure the prompt truly aligns with your discussion goal. You might simplify the language or break it into two parts if needed (e.g., first identify a cause, then explain why it's significant). When you run the TPS in class, explicitly mention the alternative ways to participate ("feel free to jot your thoughts or sketch a concept map during think time") to normalize different expression modes. This inclusive approach, brainstormed with AI's help, can result in richer participation.

⌚ Using AI to Design Peer Review Exercises

Preparation: Peer review builds metacognitive skills and fosters a collaborative learning culture. Generative AI can suggest structures and prompts for peer review that make the process more effective, even providing example feedback phrasing for students to use.

Ingredients:

- The assignment or work that students will peer review (e.g., a draft essay, a project plan, a lab report).
- Specific aspects you want them to focus on (thesis clarity, use of evidence, organization, etc.).
- Any guidelines you want to provide to students for constructive feedback.

Try this prompt:

"Generate a structured peer review worksheet for [assignment type]. Include 3–4 questions or prompts that guide reviewers to give constructive feedback on key criteria (e.g., clarity, evidence, organization)."

For instance: "*Generate a structured peer review worksheet for a 5-page persuasive essay draft. Include prompts for feedback on thesis clarity, argument strength, evidence, and writing clarity.*"

Example Peer Review Chat:

1. **Thesis & Purpose:** *In your own words, what is your peer's thesis or main argument? Is it clear and specific? Suggest one way to clarify or strengthen it if needed.*"
2. **Argument & Evidence:** *Identify one point in the essay where the argument is strong and explain why. Identify one claim that needs better support or explanation. What evidence or examples might improve it?"*
3. **Organization:** *Does the essay flow in a logical order? Note any part where you felt lost or the ideas jumped. Suggest a transition or reordering if applicable."*

4. Clarity & Style: *Highlight one sentence or phrase that was well-written or powerful. Point out one sentence that was confusing or could be clearer. Offer a suggestion to rewrite it.*

Cleanup: Review the AI-generated prompts and modify the wording to match your class's terminology or the specific rubric. Remove any parts that don't apply and add any criteria you want (for example, "formatting and citations" if that's important). The result is a peer review guide that you can distribute to students. By following structured prompts, students are more likely to give meaningful feedback rather than just "looks good" or "needs work." AI helped draft these prompts, but your oversight ensures they fit your assignment and students.

Building UDL-Compatible Discussion Structures

Preparation: Discussions allow students to deepen understanding through dialogue—but only if all students can participate. A Universal Design for Learning (UDL) approach to discussions means providing multiple ways for students to engage (spoken, written, small group, whole group). AI can help generate ideas for structuring discussions that accommodate different needs.

Prompt Ingredients:

- The discussion topic or question.
- Information about your class size and format (so AI can tailor suggestions for online forums vs. live class, etc.).
- Any known student needs (e.g., some students who prefer writing to speaking, etc.).

Try this prompt:

"Suggest a format for a class discussion on [topic] that incorporates UDL principles. The class has [number] students. Include at least one way for students to participate without speaking aloud."

Example: "Suggest a format for a class discussion on climate change impacts that incorporates UDL principles. The class has 25 students and meets in person. Include at least one way for students to participate without speaking aloud."

Example Discussion Chat: The AI might propose:

- "**Gallery Walk with Silent Reflection:** Post four sub-questions or case examples about climate change impacts around the room (stations). Students rotate in small groups. At each station, they discuss in their group for a few minutes, and one member jots down key points on a large post-it. One station is a 'silent reflection' station where students write individual responses on sticky notes and put them up. After rotation, do a whole-class review of the notes from each station. This allows those who prefer writing to contribute equally."

It might also suggest an online backchannel: “*During whole-class discussion, allow students to also post thoughts on a shared Google Doc or chat – the instructor will weave these written comments into the conversation.*”

Cleanup: Evaluate the suggestion. The gallery walk example might be a bit much for a single class period, but you could adopt elements of it (maybe two stations instead of four). Ensure any method aligns with your time constraints and classroom. Perhaps you simplify to: a think-pair-share followed by collecting written ideas on the board. The key outcome here is having multiple avenues for participation. AI’s idea gave a creative starting point that you can now tailor. Before the discussion, explain to students that they have options (speak to group, or write a comment, etc.) so they know their contributions are valued in any form.

Using AI to Create Collaborative Mind Maps

Preparation: Mind maps help students visualize relationships between concepts. Generative AI can suggest topics or first branches for a mind map, which students can then build on collaboratively. This can be especially useful when introducing a complex topic and you want to gauge prior knowledge or see how students connect ideas.

Prompt Ingredients:

- A central topic for the mind map.
- Possibly a few subtopics if you want to provide structure.
- The platform or medium (on paper, on the board, using a collaborative tool like Jamboard, etc.).

Try this prompt:

“Outline a mind map for [topic]. Provide 4–6 main branches that cover key subtopics, without filling in the details under each branch.”

Example: “*Outline a mind map for the topic ‘ecosystem health’. Provide 5 main branches (key subtopics) but no details under them.*”

Example Mind Map Chat: The AI might output something like:

- Central Topic: Ecosystem Health
 - **Biodiversity** (species variety and roles)
 - **Water Quality** (cleanliness, pollutants)
 - **Soil Condition** (nutrients, erosion)
 - **Human Impact** (development, pollution, conservation efforts)
 - **Climate Factors** (temperature, precipitation patterns)

Cleanup: Use these AI-suggested branches as a starting point. Maybe you’ll tweak one (“Climate Factors” might be too broad, you might change it to “Climate Change Effects”). In class, you can draw this skeleton on the board or share it digitally, and then have students work

in groups to add details to each branch (each group could take one branch and add examples, facts, questions). This collaborative mind-mapping becomes an interactive lesson. The AI saved you time brainstorming the main branches so you can focus on facilitating the activity and helping students fill in connections.

Using AI to Support Flipped Learning Video Content

Preparation: In a flipped classroom model, students might watch a video or lecture at home, then do activities in class. Ensuring students engage with and understand the video content can be challenging. AI can help generate guiding questions or note-taking templates for students to use with the video, or even create a brief quiz on the video content for accountability.



Prompt Ingredients:

- The topic of the video and key points it covers.
- Length of the video or any specific segments to focus on.
- Your goals for student outcomes from the video (e.g., identify main ideas, raise questions, apply concepts).

Try this prompt:

“Create 3 viewing guide questions for a flipped class video on [topic]. Make sure the questions encourage students to apply or reflect on the video content, not just recall facts.”

For instance: “*Create 3 viewing guide questions for a flipped class video on photosynthesis. Ensure the questions make students apply or reflect on the content, beyond just recalling facts.*”

Example Flipped Video Chat: The AI might generate:

1. *“During the video, note one example the presenter gives of how a change in environment affects the rate of photosynthesis. Why do you think that environmental factor has that effect?”*
2. *“The video explains the roles of chlorophyll and sunlight in photosynthesis. Imagine a plant in a very low-light environment. What adaptations or changes might help it survive? Jot down your ideas.”*
3. *“After watching: List two questions you still have about photosynthesis or related processes (things that were unclear or that you’re curious about). Bring these to class.”*

Cleanup: Review these questions and modify if needed. Maybe you’ll simplify wording for your level of students, or change an example to one you know they can relate to. Provide these questions as a worksheet or online quiz that students complete while or after watching the video. The AI’s contribution is helping transform passive video watching into an active learning process. Students will come to class with notes, thoughts, and questions, making the in-class portion (the “salad” to follow the video “soup”) more productive.

⌚ Using AI for Accessibility & Inclusion Supports

Preparation: Supporting all learners is essential. AI can help reduce barriers by generating alternative materials or formats. For example, you can use AI to simplify text, create glossary lists for difficult readings, or generate examples for students with different learning preferences. This recipe illustrates using AI to adapt content for accessibility.

Prompt Ingredients:

- A piece of content that some students struggle with (e.g., a dense reading, complex instructions).
- The specific challenge it presents (difficult vocabulary, too theoretical, etc.).
- The format of support you want (summary, glossary, simpler rephrase, audio script, etc.).

Try this prompt:

“Summarize the following text in simpler language and create a short glossary of 5–7 key terms with definitions in context: [insert a paragraph or outline of the content].”

For example: “*Summarize the following text in simpler language and create a short glossary of 5 key terms: [insert two paragraphs from a journal article on economics].*”

Example Accessibility Chat: Suppose we had a paragraph on Keynesian economic theory. The AI might output:

- *Summary:* “In short, Keynesian economics suggests that during a recession, the government should spend money to encourage growth. It argues that active steps by the government can help stabilize the economy when private sector spending is low.”
- *Glossary:*
 - *Recession:* A period of economic decline where business activity slows and unemployment may rise.
 - *Stimulus:* Actions (often by a government) designed to encourage economic growth or activity.
 - *Aggregate Demand:* The total demand for goods and services in an economy. (Keynesians believe boosting this can help during recessions.)
 - *Fiscal Policy:* Government decisions about spending and taxes, which can influence the economy.
 - *Investment:* In economics, spending on projects or purchases intended to create future benefits (like businesses buying new equipment).

Cleanup: Check the summary for accuracy and completeness. Ensure none of the simplified language changes the meaning. The glossary should be correct – double-check definitions and tweak wording if needed (especially to align with how you’ve used the terms in class). You can then provide this summary and glossary to students who need a lighter reading level or as a study aid for all students. This kind of AI support can be a game-changer for inclusion: it gives

struggling students an entry point without replacing the original content (which they can tackle with more confidence).

Similarly, AI could generate transcripts or even *text-to-speech scripts* for audio materials (making videos accessible to those who need text, for example). Always review AI outputs for errors, but these tools can significantly reduce the labor required to create accessible alternatives.

Using AI to Support Community-Building Activities

Preparation: A sense of community enhances motivation, engagement, and a sense of belonging. AI can help brainstorm icebreakers or community-building prompts that go beyond the generic “introduce yourself.” Here we’ll use AI to spice up activities that help students connect with each other, whether at the start of a course or throughout.

Prompt Ingredients:

- Some information about your class (size, whether students already know each other, online/in-person).
- Any theme or subject connection you’d like the activity to have.
- The amount of time you can devote to the activity.

Try this prompt:

“Suggest a community-building activity for a [modality] class of [N] students studying [subject]. It should take about [time] and help students get to know each other. Tie it loosely to the subject matter if possible.”

For example: “*Suggest a community-building activity for an online class of 20 students studying environmental science. It should take about 15 minutes and help students get to know each other, with a loose tie to environmental science.*”

Example Community Chat: The AI might suggest:

- *“Eco-Speed Networking: In Zoom breakout rooms, pairs of students meet for 3 minutes each. They have two tasks: (1) introduce themselves (name, major, etc.), and (2) each share their favorite natural place or outdoor memory. After 3 minutes, shuffle the pairs (the instructor can use breakout features or have a rotation plan). This way, students bond over personal experiences and also touch on an environmental theme. After several rounds, bring everyone back and have a quick debrief: ask a few students to share an interesting place they heard about or something they have in common with a peer.”*

Or an in-person variant: *“Habitat Map: Put up map posters of different ecosystems (forest, ocean, city park, etc.) around the room. Students pick the ecosystem that they feel represents them best or that they’re most interested in. In those small groups (3-5 per poster), students introduce themselves and explain why they chose that habitat. This ties to environmental*

science content in a personal way. Afterward, each group can share one insight or commonality they discovered.”

Cleanup: Adjust the idea based on your students. Maybe not everyone has a grand outdoor memory – in that case, you might tweak to “favorite weather and why” or something more universal. Ensure the instructions are clear and that shy students won’t feel too put on the spot (speed networking might be stressful for some; you could allow typing in chat for online classes as an alternative). The AI’s suggestions give you a creative foundation to work from. By tying the community activity to your subject (even loosely), you set a tone that *learning* and *community* are intertwined in your course.

Using AI to Develop Service-Learning Opportunities

Preparation: Service-learning projects connect course objectives with community engagement. They can be complex to set up, but AI can help brainstorm potential projects that align with your content. This recipe uses AI to draft ideas for service projects or partnerships that you might not immediately think of.

Prompt Ingredients:

- The key learning outcome or unit you’d like to enhance with service experience.
- The community context (campus, local community, online communities, etc.).
- Any logistical limits (e.g., must be doable within one semester, small groups, no budget).

Try this prompt:

“Propose a service-learning project for a [course subject] class that could be completed in one semester. It should benefit the community and tie directly to what students are learning about [specific topic].”

For example: “*Propose a service-learning project for a nutrition class that could be completed in one semester. It should benefit the community and tie directly to what students are learning about public health nutrition.*”

Example Service Learning Chat: AI might offer:

- *“Students partner with the local community center to create a series of nutritional pamphlets and a one-day workshop for families. Over the semester, students will: research common nutrition challenges in the community (learning about public health data), apply class concepts to develop practical tips (e.g., affordable meal planning, understanding food labels), and then host a workshop or info session at the community center. This project lets students practice communication and see the impact of nutritional education, reinforcing course concepts about diet and health disparities.”*

Or for an environmental science class:

- “Coordinate with a local park for an ‘invasive species removal and survey’ project. Students learn in class about invasive plant species and ecosystem health. For service, they spend a few weekends helping remove invasive plants at the park and concurrently collect data (growth, area covered). They analyze the data as part of a class assignment on biodiversity and present findings to the park management. The community gets labor and data; students get hands-on experience with ecosystem management concepts learned in class.”

Cleanup: Consider feasibility. The AI’s ideas might need scaling down or up. Ensure the project truly aligns with your learning goals (e.g., creating pamphlets develops certain skills, but if your priority is data analysis, you’d tweak the project to include that component). Reach out to the suggested community partner (AI assumes availability, but you need to confirm a real organization’s interest and capacity). The AI proposal gives you a clear vision to start the conversation. Also, evaluate if the scope is manageable – maybe instead of “a series of pamphlets and a workshop,” you choose one format. Once refined, you’ll have a meaningful service-learning project that enriches student learning and contributes to the community.

Using AI to Generate Case Studies and Scenarios

Preparation: Case studies allow students to apply knowledge to realistic situations. AI can generate diverse, tailored scenarios for classroom analysis or role-play. This is useful across disciplines – from business to education to science – whenever you want students to practice decision-making or problem-solving in context.

Prompt Ingredients:

- The concept or theory you want to illustrate.
- The setting for the case (industry, historical period, classroom, laboratory, etc.).
- Any specific challenge or twist (ethical dilemma, constrained resources, particular stakeholders).

Try this prompt:

“Create a brief case study scenario that illustrates [concept]. It should involve a specific situation in [context] and pose a problem for students to solve or discuss.”

Example: “Create a brief case study scenario that illustrates the concept of opportunity cost. It should involve a specific situation in a small business context and pose a decision problem for students to solve.”

Example Case Study Chat: The AI might output:

- “Scenario: Maria runs a small bakery. She has a limited budget for the month. She can either buy a new commercial oven that would increase her output or spend the money on an advertising campaign to attract more customers. She’s calculated that a new oven could increase production (and thus sales) by 20%, whereas advertising could increase

sales by a different route. However, she cannot afford both this month. Ask students: What is the opportunity cost of each option, and what factors should Maria consider when making her decision? How might seasonal demand (holidays coming up) influence her choice?"

This scenario compels students to apply the concept of opportunity cost (choosing one option means giving up the next best alternative) in a concrete way.

Another example for a psychology class on ethics:

- *"Scenario: A researcher is running a study on campus about stress and academic performance. They realize halfway through collecting data that their survey inadvertently asks some sensitive personal questions without proper anonymization. They have 50 responses already. The dilemma: Do they continue the study, revise it (and if so, how to handle existing data), or halt it? What are the ethical implications and what would you advise as the next step?"*

Cleanup: Adjust details to fit your lesson. Ensure the scenario isn't too complex to explain quickly but has enough depth to spark analysis. You might simplify numeric details or clarify any jargon. It's often good to accompany case scenarios with guided questions (the AI gave some in the bakery example). Write or display those questions when you present the case to students. Thanks to AI, you now have a fresh case example without having to write it entirely yourself, and you can generate several variations or follow-ups if needed (e.g., ask AI "what if" to extend the scenario).

Using AI to Enhance Culturally Responsive Teaching

Preparation: Culturally responsive teaching involves connecting learning to students' diverse backgrounds and experiences. AI can assist by generating examples, metaphors, or case studies from diverse cultures or contexts, which you can use to broaden the appeal and relatability of your lesson content.

Prompt Ingredients:

- The concept or skill you are teaching.
- A few different cultural or community contexts are represented in your student body (or global contexts, if relevant).
- The format of the example you want (story problem, analogy, discussion prompt, etc.).

Try this prompt:

"Give an example of [concept] that would resonate with someone from [X culture/community] and another example that would resonate with someone from [Y culture]. Keep the explanations simple and relevant to everyday life."

For instance: “*Give an example of the concept of supply and demand that would resonate with someone from a farming community and another example for someone from a city.*”

Example Culturally Responsive Chat: The AI might respond:

- “*Farming community example (supply & demand): Imagine this year your town’s tomato harvest is huge (supply is high). Everyone has plenty of tomatoes to sell at the market. Because there are so many tomatoes, the price per basket goes down – otherwise sellers won’t be able to get rid of them all. Next year, if a drought hits and few tomatoes grow (supply is low), each basket will fetch a higher price because more people want tomatoes than there are tomatoes available.*”
- “*City example (supply & demand): Think about rush-hour rideshare prices. On a rainy weekday at 5 PM, lots of people want to book Ubers (demand is high) but there aren’t many drivers out (supply is low). The app’s surge pricing kicks in, and fares go up because so many people are competing for a ride. Conversely, on a Sunday morning when demand is low, the same trip is much cheaper.*”

Both examples teach the same concept but in contexts familiar to different students.

Another approach: have AI generate names or contexts in word problems that reflect a variety of backgrounds (e.g., “Aisha, who runs a food truck...” and “Miguel, who manages his family’s store...” etc.), just to ensure representation.

Cleanup: Check the examples for accuracy and appropriateness. You may refine details (maybe in the farm example, note if people can also preserve tomatoes, etc.—but don’t overcomplicate if the focus is economic concept). Ensure the cultural references are authentic and not stereotypical. Possibly, you might ask a colleague or student from that community if the example rings true. The goal is to use these AI-assisted examples as a bridge, not as definitive cultural narratives. When presenting them in class, you could invite students to share if the scenarios resonate with them or to provide their own analogies. By doing so, you validate diverse experiences in learning the material.

Generating Module Graphics

Preparation: Visuals can enhance learning by providing memorable cues or simply breaking up text. If you want to include simple graphics or icons for your course modules (say on your Learning Management System or in your syllabus), AI image generation tools can create unique visuals. While our focus here is text-based AI, we acknowledge generative AI can also produce images. If you have access to an AI image generator, you can try creating icons that match your module themes.

Prompt Ingredients:

- A clear idea of the symbol or imagery associated with each module.

- Access to an AI image generation tool (ensure it's one you have permission to use and that the style fits your needs).
- Alternative: if not using AI for images, consider asking students to contribute images or using open-source graphics.

Guidance (if using AI for images): Many AI image tools work via prompt as well. For example, for a module on “Digital Marketing,” you might prompt the image AI with “*flat icon of a smartphone with megaphone, representing digital marketing*” and see if it produces something usable. For “Genetics Basics,” you might prompt “*cartoon DNA double helix icon, simple design, colorful*”. Always review the usage rights and clarity of images. Sometimes AI images have weird artifacts or inaccuracies (watch out for gibberish text or disjointed hands in more complex images).

If AI images aren’t an option, a text-based AI can still help by suggesting what visuals would be appropriate (“For Module 3: Thermodynamics, an image of a thermometer and gear to represent heat and work could be effective.”). You could then find a free stock icon that matches that description.

Cleanup: Whichever route you take, be sure the graphics are accessible (provide alt-text descriptions for visually impaired students). Keep graphics simple and consistent in style. They should enhance recognition of the module topics, not distract. Used thoughtfully, a visual element for each part of your course can make the content more engaging and organized.

By the end of the Soups & Salads section, you’ve seen how AI can assist in making classes more interactive and inclusive. From brainstorming active learning ideas to adapting materials for diverse needs, these “recipes” show practical ways to enrich the everyday learning experience. In the next chapter, the Main Dishes, we will tackle designing assessments – the more substantive course requirements – and see how AI can help make them authentic and effective.

Chapter 5: Main Dishes

Authentic Assessment Design with AI

Assessments are the “main courses” of the learning experience – they are substantial, memorable, and meant to satisfy learning objectives. In this chapter, we focus on creating authentic assessments with the assistance of AI. Authentic assessments require students to apply their knowledge in real or realistic contexts (projects, case studies, portfolios, debates, experiments, etc.), rather than just taking traditional tests or quizzes. They align with higher-order thinking and often relate to real-world skills. Designing these can be challenging and time-consuming for instructors, which is where generative AI can become a valuable sous-chef. It can help brainstorm project ideas, generate case study scenarios, draft assignment instructions, and even create grading rubrics or criteria.

Why Authentic + AI? Authentic assessments have big benefits: they make learning more meaningful and discourage academic dishonesty (it’s harder to cheat on a unique project than on a standard test). However, they typically require significant preparation – coming up with a good project prompt or scenario, detailing instructions, ensuring alignment with outcomes, and managing the workload for both students and the instructor. AI can help lighten this load. According to educators at the University of Florida, pairing AI with authentic assessment can address concerns like the heavy prep time and even some integrity issues. For example, if you want to include a role-playing exercise as an assessment (say, a simulated client-consultant interaction in a Counseling class), but you worry about devoting too much class time to it, you could have students individually engage in a role-play with an AI chatbot outside of class and then submit a reflection – achieving the role-play benefits without scheduling a live session for everyone. Generative AI provides flexibility: it can act as a role-play partner, generate diverse case data, or supply personalized prompts, scaling authentic tasks in ways that might be impossible otherwise.

Designing assignment scenarios and prompts. Let’s say you want an assessment where students solve a real-world problem. AI can generate rich scenarios for you. For a Chemistry course, you might prompt: *“Create a realistic scenario for a chemistry final project that involves analyzing a real-world water sample and making recommendations. Include some data or context for the scenario.”* The AI could produce:

Scenario: “The local river has been found to have an elevated level of an unknown contaminant. As a chemist, your job is to identify the contaminant and suggest a remediation plan. You have access to water sample data (pH levels, presence of certain ions, etc.) and must run appropriate tests. **Deliverable:** a report identifying the contaminant (from given options) and proposed steps to clean the water, with chemical justifications.”

This gives you a solid starting point for an authentic task (environmental chemistry case). You'd refine specifics (maybe actually provide a dataset or narrowed options), but AI saved you from staring at a blank page. Similarly, in a Marketing course: "*Propose an authentic assessment for a marketing class focusing on digital campaigns.*" It might reply:

Task: "Each student acts as a marketing consultant for a small business. They must create a digital marketing plan for a real or fictional local business of their choice, including social media strategy, a budget, and expected metrics. The plan will be presented as a pitch deck to the class (or to the 'client')."

You can then add detail like requiring them to actually draft sample social media posts or analyze metrics from a trial run if feasible. The key is AI can generate the core idea and structure, which you customize to your course.

Drafting clear assignment instructions (TILT framework). Crafting student-friendly assignment sheets is an art. They should explain *what* to do, *why* to do it, and *how* it will be evaluated (this is the Transparency in Learning and Teaching – TILT – framework). AI can help generate the first draft of instructions following that structure. For example, you prompt: "*I need to write instructions for an authentic assignment where students create a podcast episode on a historical event. Use the TILT framework (Purpose, Task, Criteria).*" The AI might output:

- **Purpose:** "This project lets you demonstrate your understanding of [course topic] by teaching it to others. You'll practice research, oral communication, and creative skills by producing a podcast – a format that historians increasingly use to engage the public."
- **Task:** "You will work in a team of 2–3 to create a 10-minute podcast episode on a historical event of your choice (within 1900–1950). Your episode must be structured (introduction, background, analysis, conclusion) and include at least two scholarly sources and one primary source. Every team member should have a speaking role. Submit an outline, the audio file, and a transcript with citations."
- **Criteria for Success:** "A successful podcast episode will be **accurate** (historical facts are correct and sourced), **insightful** (provides analysis or a unique perspective, not just a recap of events), **engaging** (clear audio, organized narrative, holds listener interest), and **collaborative** (all team members contribute). See the attached rubric for details on how each of these areas will be evaluated. For example, under 'engaging,' an excellent episode uses storytelling techniques and has good audio quality; under 'accurate,' it correctly references all sources and provides context for quotes."

You, of course, would tweak and ensure it fits your exact needs, but notice how the AI provided a structured draft in seconds. You'd verify that the Purpose aligns with your goals, adjust the Task details (e.g., allow 8–12-minute episodes), and finalize the Criteria/rubric section as needed. AI's draft ensures you didn't forget a section and even incorporated best practices, such as explaining the assignment's why.

Generating rubrics. Speaking of rubrics, AI can assist there, too. If you provide it with the criteria and levels, it can fill in descriptions. Or you can ask it for a starting rubric. For instance: *“Generate a rubric with 4 categories (Content, Analysis, Communication, Teamwork) for the podcast project, with three performance levels (Excellent, Satisfactory, Needs Improvement).”* It might produce a table (text-based) that you can then refine, ensuring each description matches your expectations. Always review AI-generated rubrics carefully – ensure the language is clear and the distinctions between levels are fair and observable.

Balancing workload and integrity. One concern with authentic assessments is the grading load and ensuring students actually meet the intended challenges (and not just have AI do it for them!). AI can help you here in two ways:

1. **Creating exemplars or checklists:** You can have AI generate portions of the project to use as examples in class. E.g., “Write a sample introduction for the podcast on X topic” – use it to show students what a good intro sounds like (or even a bad one, if you ask for a mediocre version!). This gives them concrete guidance. It also demystifies the assignment, reducing the need for clarifying emails later.
2. **Designing scaffolded pieces:** AI can help break a big project into steps. Perhaps it suggests submitting the proposal, script draft, and final audio separately. Not only does this scaffold learning (and prevent last-minute cramming), it also lets you spot if someone suddenly turns in work that looks like AI-generated content – because you’ve seen their progress. If a student’s proposal is rough but the final is extremely polished in a way that mismatches their voice, that’s a flag to discuss. Emphasize process over perfection; maybe even ask for an “AI reflection” – e.g., have students submit a brief statement of how they did the research or what tools (including AI, if allowed) they used to create the project. Normalizing transparency in their process can reduce inappropriate use of AI.

By leveraging AI in these ways, you transform it from a potential “cheat” into a support tool that actually reinforces authentic learning. Students will know you’re aware of AI (perhaps because you’ve integrated it into the assignment in a positive way), which can deter misuse and encourage them to focus on the creative and analytical parts of the task.

Now, let’s put these ideas into practice with some concrete recipes for designing and implementing authentic assessments.

Main Dishes – Expanded Section

Below are sample recipes to help you develop authentic assessments, from project prompts to grading tools. Each recipe addresses a step in the assessment design process, showing how AI can contribute while you remain the master chef in evaluating student learning.

⌚ Designing Case-Based Performance Assessments

Preparation: Developing clear assignments and corresponding rubrics can be time-consuming. AI can help draft scenario-based assessments and suggest evaluation criteria, which you then customize. In this recipe, we create a case-based assignment (where students must perform or create something in a scenario) and outline a rubric.

勺子图标 Prompt Ingredients:

- A topic or unit you want to assess authentically.
- Realistic roles or situations relevant to that topic.
- Key skills or knowledge the task should demonstrate (this will feed into rubric criteria).

Try this prompt:

“Create a real-world scenario for a performance assessment in [course/topic]. Describe the task students must do in that scenario. Then suggest 4 rubric categories to evaluate their performance.”

For example: *“Create a real-world scenario for a performance assessment in an Environmental Policy course. Describe the task students must do, and suggest 4 rubric categories for evaluation.”*

Example Case-Based Chat: The AI might output:

- **Scenario:** “You are an environmental policy consultant tasked with advising a city council on reducing plastic waste. The council will hold a meeting (role-played in class) where you must present a policy proposal. Your task: research and create a brief policy proposal (2-page memo + 5-minute oral presentation) recommending regulations or initiatives to cut plastic waste in the city by 50% over 5 years. You must consider economic, environmental, and social factors in your plan.”
- **Rubric Categories:** 1. **Policy Content & Feasibility** (Is the proposed solution well-informed, realistic, and detailed?); 2. **Use of Evidence** (Does the student use data and case examples to support their proposal?); 3. **Communication & Persuasion** (Quality of writing and speaking, clear organization, ability to answer council questions convincingly); 4. **Consideration of Impacts** (Addresses economic, environmental, social implications, showing depth of analysis).

Cleanup: Refine the scenario details – maybe specify the city context, or adjust scope if needed. Use the rubric categories as a starting point: ensure they align with your priorities (maybe you add **Collaboration** if it’s a group project, or **Creativity** if that’s valued). Write descriptions for each level of each category (AI can help with that too if you prompt it for rubric detail, but make sure the final language matches your standards). When assigning to students, give them

both the scenario and rubric so expectations are transparent. By having AI generate a plausible scenario, you save time and might get an angle (like plastic waste, in this case) that you refine based on what excites your class or is locally relevant.

Creating Authentic Performance Assessments

Preparation: Authentic performance assessments challenge students to solve complex, real-world problems. AI can help brainstorm ideas that align with course outcomes and student interests. In this recipe, we'll develop an authentic project idea and outline how to introduce it to students (including the Purpose, Task, and Criteria).

Prompt Ingredients:

- Course learning outcomes you want to target.
- A general theme or real-world context related to your course.
- Consideration of student resources (time, tools) for the project.

Try this prompt:

“Propose an authentic final project for a [course subject] class. It should require students to apply what they learned to a real-world problem or create a real product. Include: the scenario/task and the skills it demonstrates.”

For example: *“Propose an authentic final project for an Intro to Sociology class. It should require students to apply what they learned to a real-world problem or produce something tangible. Include the scenario/task and the skills it demonstrates.”*

Example Project Chat: The AI might propose:

- **Project:** **“Community Social Analysis & Proposal** – Students will act as sociological consultants for their own community. Each student identifies a social issue in their community (e.g., youth unemployment, neighborhood segregation, public health outreach). They will investigate it using sociological methods (interviews, observations, or data analysis using publicly available data). The final deliverable is a report and presentation to a mock ‘community board’ (the class), where they explain the issue’s social roots (using theories from class) and propose one evidence-based initiative or policy to help address it.”
- **Skills Demonstrated:** “This project demonstrates students’ ability to conduct basic sociological research (data gathering and analysis), apply sociological theories to real situations, engage in critical thinking about solutions, and communicate findings to a general audience. It mirrors tasks a professional in social research or public policy might do.”

Cleanup: Adjust scope as needed. Maybe not all students have time to conduct interviews – you could allow them to use existing research or prior surveys instead. Ensure every student can find sufficient information on their chosen issue. You might scaffold with a proposal checkpoint to approve topics and avoid overly broad or super-narrow ones. Articulate the Purpose/Task/Criteria to students (AI's description already covers Purpose and Skills, which you can share as the "why"). Criteria might include Sociological Understanding, Evidence & Research, Proposal Feasibility, and Communication. You'll fill in those rubric details. By framing the assignment as "you're a consultant presenting to a community board," it feels more real than a typical term paper, increasing engagement.

And importantly, because each student focuses on a different issue (likely), the work is personalized, which naturally reduces plagiarism and inappropriate AI use (since it's hard for AI to produce a cookie-cutter answer to a unique community issue analysis without significant student-specific input). If a student does use AI, it would be as a tool in research or writing, which you can manage by perhaps asking for an appendix on "Methodology" where they reflect how they gathered info (and can mention if AI helped summarize some data, etc.).

The authenticity here also means you, as an instructor, get to read a variety of interesting reports instead of 30 nearly identical papers on the same prompt – a grading challenge, but also more rewarding. AI helped by structuring this idea and linking it to course skills; you carry it through by mentoring students on execution and assessing their unique contributions.

Building GPTs as Classroom Assistants

Preparation: With the advent of custom AI (GPT) tools, instructors can create their own AI assistants tailored to their course. These *Classroom GPTs* can answer student questions about the syllabus, quiz students on readings, or provide feedback on drafts. Building a custom GPT involves uploading course materials and defining the AI's role. This recipe guides you through creating a GPT assistant for your class.



Prompt Ingredients:

- Access to a platform for creating custom GPTs (such as OpenAI's ChatGPT custom GPT builder, available to Plus or institutional subscribers).
- Course content to upload: syllabus, lecture notes, slides, readings, etc. (in digital formats like PDF, DOCX).
- A clear idea of what you want the GPT to do (e.g., answer factual questions, tutor on problem-solving, give feedback on writing).

Technical Steps to Create a Custom GPT:

1. **Access the GPT Builder:** Log in to the AI platform (e.g., ChatGPT) with a Plus/educator account. Navigate to the "My GPTs" or custom bots section. Click **Create a GPT**. (Note: as of 2024, this requires a paid plan or institutional access.)

2. **Configure Basic Settings:** Give your GPT a descriptive name (e.g., *Biology 101 Study Buddy*) and write a short description for users. In the **Instructions/Persona** section, define the role – for example: *“You are a helpful tutor for Biology 101 students at Kutztown University. You can answer questions about the syllabus, explain concepts from class, and give examples. Always be accurate and use simple language. If a question is about course policy, base your answer on the syllabus. If you don’t know an answer from the provided materials, encourage the student to ask the professor or find the answer together.”* This primes the AI’s tone and scope.
3. **Upload Course Materials:** Find the **Knowledge** or **Files** section in the builder interface. Upload your selected files (syllabus, assignment sheets, textbook excerpts, etc.) . The system will ingest these so the GPT can reference them when responding. (*There is typically a limit, e.g., 20 files, and possibly a size limit per file.*) Upload strategically: include content students frequently need help with – instructions, key readings, terminology lists, etc. Avoid anything with sensitive info (no private student data or unpublished research).
4. **Set Capabilities:** Many GPT builders allow enabling or disabling features like web browsing or code execution. For a classroom assistant, you might disable browsing (to keep it focused on your materials and avoid unpredictable internet info) and definitely disable any actions that could be harmful. Keep the GPT’s domain limited to your content to ensure reliability.
5. **Prompt Starters (Optional):** You can pre-load example questions or conversation starters the GPT can show. For instance, *“Ask me about our syllabus or course concepts!”* or an example exchange like student asks “What’s an example of classical conditioning?” and GPT answers pulling from class notes. This helps students see what they can use it for.
6. **Test and Iterate:** Use the **Preview** function to chat with your GPT assistant . Ask it a few questions (e.g., “When is the midterm?”, “Explain the difference between mitosis and meiosis.”). Check if it uses the syllabus for the first and course notes for the second. If it gives wrong or unwanted answers, adjust your instructions or upload additional clarifying info. For example, if it didn’t know the midterm date, ensure the schedule from the syllabus is in the knowledge base. If it explained mitosis well but with too much jargon, tell it in the persona instructions to use simpler language or shorter answers. Iteration is key – refine until you’re happy with its performance.
7. **Publish (or Share) and Guide Students:** Once satisfied, save the GPT. You can share it via a link or within your class’s LMS if supported. **Introduce it to students with guidance:** explain its purpose (e.g., “This is a tool to help you study and get quick answers – like a TA bot.”) and its limitations (“It only knows what I’ve loaded into it; it might not be perfect. Always use your judgment and let me know if something seems off.”). Encourage them to use it for reviewing materials, brainstorming project ideas, or

practicing quiz questions, but not for cheating on assessments. If possible, demonstrate it live in class: e.g., ask it “What are three key points from Chapter 2?” so students see how to interact with it.

Uploading Course Materials: When adding files, think of it as the GPT’s “textbook.” Good inclusions: your syllabus (so it can answer policy and due date questions), lecture outlines or slides (for content), assignment instructions and rubrics (to give guidance on those), selected readings or study guides. If you have a lot of material, prioritize core content and FAQs. Note that whatever you upload might be visible to anyone who uses the GPT, so avoid proprietary textbook chapters unless allowed, and never upload personal student info or anything confidential. The custom GPT will only be as accurate as these sources, so make sure they are correct and final versions.

Scaffolding Interactions for Student Learning: Guide students on how to use the GPT effectively, so it supports learning rather than just giving answers. Some tips to share with them:

- *Ask specific questions.* Instead of “Explain Chapter 3,” try “Can you summarize the three main theories from Chapter 3 and give an example of each?” The GPT can then retrieve targeted info and present it in a digestible form.
- *Use it for practice.* For instance, a student can say, “Quiz me on key terms from the unit on photosynthesis,” and the GPT can generate practice questions. Or “Give me a practice problem involving Newton’s second law,” and perhaps it will provide one. This is a great way to get extra practice beyond what you’ve provided.
- *Draft feedback:* If working on a paper, a student might paste a paragraph and ask, “How can I improve this explanation?” The GPT, having access to course writing guidelines or examples, might give tips (“clarify this term,” “add an example here”). Emphasize this is for suggestions, not final judgment. It’s like getting a second pair of eyes.
- *Brainstorming:* For projects, students could prompt, “I need ideas for my history project on local WWII memorials. What might I focus on?” The GPT might list possible angles, having “read” any project prompt file you uploaded. This can help those who are stuck get started (again, they should then check those ideas with you or research more, but it breaks the blank-page anxiety).

Examples of GPT Support:

- *Assessment Prep:* Students often ask, “What should I study for the exam?” If your GPT has the study guide or lecture notes, they can ask it to highlight key areas. It could even generate a short practice quiz. For instance, “What are some questions I should be able to answer after learning about photosynthesis?” and it might output, “Explain the role of

chlorophyll... Describe the light and dark reactions..." etc., which the student can then try to answer on their own.

- *Project Feedback:* Imagine a student designing an experiment. They could outline their plan to the GPT: "I'm planning to survey 50 students about study habits for my psychology project. Any suggestions to improve my methodology?" The GPT might respond with something like, "Consider how you'll ensure a representative sample – maybe include students from different majors or years. Also think about what time of day you administer the survey, as that could bias results..." – basically, acting like a brainstorming partner. The student can then refine their plan and, importantly, discuss it with you for approval.
- *Inclusive Learning:* Not all students feel comfortable raising questions in class. A shy student might ask the GPT to clarify something they found confusing: "Explain in simpler terms what 'cultural capital' means, with an example." Because it's based on class materials, the answer should be consistent with your teaching, but perhaps phrased differently that clicks for the student. Or a student who is an English language learner might paste a confusing sentence from the textbook and ask the GPT to rephrase it more simply. The GPT essentially provides on-demand tutoring.

Guiding Proper Use. It's crucial to frame the GPT as a helper, not a cheat. Make a classroom policy about AI: for example, "You may use the class GPT to assist your learning (e.g., ask it to explain concepts, practice questions). However, do not copy its answers directly for graded work – that would be academic dishonesty. Think of it like asking a tutor for help: learn from it, then do your own work." Perhaps require students to note in a project if they used the GPT and how ("I consulted the Biology 101 GPT to get feedback on my lab outline"). This keeps things transparent and educates students on leveraging AI responsibly, a skill they'll need in the wider world.

By building a custom GPT for your class, you create an always-available, course-specific assistant. It can reduce repetitive questions to you (freeing your time for deeper mentoring) and empower students to explore and review knowledge at their own pace. It's like each student has a personal TA – one that reiterates what you value and teach. With technical setup and thoughtful scaffolding, GPTs can support assessment preparation, project development, and inclusive, differentiated learning.

Chapter 6: Side Dishes

Scaffolding Learning Experiences

Not every student can dive straight into a main course without some sides to nourish them along the way. “Side Dishes” refers to scaffolding – the support structures and interim activities that help students build up to the big assessments or complex skills. In teaching, scaffolding could mean breaking a project into milestones, providing guiding questions, offering practice exercises, or supplying exemplars and rubrics in advance. In this chapter, we explore how AI can assist in planning these scaffolded learning experiences, ensuring that tasks are introduced in “do-able” increments and that students aren’t overwhelmed when tackling challenging content.

Planning step-by-step learning with AI. Suppose you have a major project (like those authentic assessments from Chapter 5). You can use AI to help outline a timeline or sequence of supporting tasks leading up to it. For example, for a Research Paper assignment due at semester’s end, ask AI: *“What are some intermediate checkpoints I could set to scaffold a semester-long research paper for juniors, and how far apart should they be?”* It might propose: “Week 3: Research question due. Week 5: Annotated bibliography of 5 sources due. Week 8: Outline of the paper due. Week 11: Rough draft for peer review. Week 14: Final paper due.” This is a classic scaffold breakdown that many instructors do – but AI gave it instantly, and you can tweak (maybe you prefer fewer checkpoints or different spacing). The point is that AI helps to structure the pacing. If you follow up with *“Provide guidance prompts or tips for students at each of those checkpoints,”* it can generate something like: for the annotated bibliography, a mini guide on evaluating sources; for the outline, key components to include. These could be turned into brief handouts or discussion points.

Generating guiding questions and hints. When students are learning a complex concept, you often scaffold by asking guiding questions. AI can help generate those. For instance, in a Philosophy class discussing a difficult text, you might request: *“Create a series of progressively deeper questions to guide students through Kant’s categorical imperative concept.”* It may produce: “1) What do you think the phrase ‘categorical imperative’ means in general terms? 2) According to Kant, what makes an imperative categorical rather than hypothetical? 3) Can you think of an example of a categorical imperative in everyday life? 4) Why does Kant believe only actions done from duty have moral worth? 5) How might someone criticize the idea of a categorical imperative?” These questions build from comprehension to application to critique – a nice, scaffolded discussion or reflection sequence. Of course, you (the instructor) will validate

the questions and ensure they fit what you covered in class, but it's a quick way to get a starting framework.

Scaffolding by chunking content. AI can help break content into smaller pieces or generate summaries that you can provide to students as scaffolding. For example, if you have a dense reading for homework, you might use AI to create a brief summary or even a glossary of tough terms, which you share with students as support (just ensure the summary is accurate!). Or, if teaching problem-solving, you can have AI generate step-by-step examples. In a Math class, you might ask: *"Provide a step-by-step solved example of a linear programming problem for students to study."* The AI can output a worked example that you then verify and hand out. This "worked example" is a known scaffolding technique – showing students a model solution before they attempt their own.

Differentiating support for varied learners. Scaffolding often needs to be tailored – some students need more, others less. AI can produce differentiated materials relatively easily. For instance, *"Explain the concept of photosynthesis at three levels: one for a middle-schooler, one for a high-schooler, and one for a college biology student."* This gives you different complexities of explanation, which you might adapt into a resource so that struggling students can review the simpler explanation first. Another scenario: *"Provide an analogy to teach the concept of recursion in computer science to someone who finds it confusing."* The AI might come up with something like a set of Russian nesting dolls or a house-of-mirrors analogy. Using multiple analogies and explanations, some text-based and some visual (maybe the AI can even generate a simple ASCII diagram or you find an image), addresses UDL's multiple means of representation. AI can assist in generating those variant representations (e.g., a brief story, a diagram description, a real-life scenario).

Scaffolding project-based learning. If you have a course that centers on a big project (like a capstone in Engineering), scaffolding is crucial. AI can function like an instructional designer by suggesting how to sequence it. For example: *"I have a term-long engineering design project where teams build a prototype. What milestones should I include to scaffold this project?"* It might suggest: "Week 2: Team formation and brainstorming; Week 4: Project proposal (design objectives and plan) due; Week 6: Preliminary design review (peer/instructor feedback on plans); Week 8: Prototype interim report (progress update, problems encountered); Week 12: Testing report (results of testing prototype); Week 14: Final presentation and demonstration." This looks like a solid scaffold. It might even add suggestions like having each milestone accompanied by a reflection or requiring advisor check-ins, which you can adopt or not.

Micro-scaffolding within lessons. Scaffolding isn't just for big projects – it also happens within a single class session. For instance, when solving a complex problem on the board, you might

prompt AI: “*I’m teaching how to analyze a poem. Give me a scaffolded approach to model analysis: steps I can go through interactively with the class.*” The AI might outline: “Step 1: Read the poem aloud. Step 2: Ask for first reactions or emotions. Step 3: Identify and define any unusual words or references (provide explanations). Step 4: Examine the structure (rhyme, meter) – maybe mark it up. Step 5: Discuss voice/tone and who the speaker is. Step 6: Interpret meaning of key lines or metaphors. Step 7: Summarize the overall theme or message.” These steps could become a guide you follow every time you analyze a poem initially, gradually releasing responsibility to students to do it themselves. It’s essentially a think-aloud scaffold. AI giving that outline saves you some planning and ensures you hit multiple aspects systematically.

Scaffolding meta-cognition and self-regulation. You can also use AI to help teach students *how to learn*. For example, “*Suggest a set of reflection questions students can answer after completing an assignment to help them self-assess and plan improvements.*” The AI might yield: “What was the hardest part of this assignment for you, and why? What strategies did you use when you felt stuck? What feedback did you receive (or anticipate), and how will you apply it next time? If you had one more week to improve your work, what would you change?” Such reflection prompts scaffold students’ ability to evaluate their own work and learn from it. You could incorporate these into the assignment workflow (perhaps as part of the submission or a separate reflection assignment).

Educational scaffolding templates with AI. Many educators use frameworks like **TILT** (for assignments), **Bloom’s Taxonomy** (for progression of questioning), or **TAP** (Think, Aloud, Pair, etc.) for scaffolding. AI, being aware of these patterns if prompted, can align suggestions accordingly. If you mention Bloom’s, it might output questions from the knowledge to the evaluation level. If you mention “gradual release of responsibility” (I do -> we do -> you do), AI can propose how a lesson might move from teacher demonstration to guided practice to independent practice. Use these to sanity-check your lesson plans: “*Here’s my plan for class X... Does this follow an effective scaffolded sequence?*” The AI might actually critique or refine it (like “maybe do a quick check for understanding after step 2 before moving on”). It’s like having an instructional coach on call.

Example – scaffolding scenario by discipline (Education). Let’s say in a Teacher Education course, students must create a full lesson plan (the assessment). Scaffolding might include: first, they critique an existing lesson plan (to learn the components), then they write just one part of a lesson plan (say, objectives and opening) for feedback, then later they draft the full plan. AI can help create the sample lesson plan to critique (perhaps from another subject, to not overlap with their own) and generate feedback questions for the critique. For example, “*Create a short lesson plan for a 4th grade math lesson on fractions that has a few intentional flaws or*

omissions, for trainees to critique." It might produce a lesson plan that lacks an assessment or has unclear objectives. Trainees then practice identifying issues – a scaffold toward making their own good lesson plan. AI accelerated the creation of that learning material.

Scaffolding and academic honesty. Interestingly, scaffolding can also deter academic dishonesty by emphasizing the process. If students must submit pieces of a project over time, it's harder to plagiarize the final product (and easier for you to see their development). Using AI to plan these pieces ensures you catch potential issues early. Also, scaffolding assignments with reflective components or a unique class context means an AI or contract cheat can't easily provide a one-shot solution. This resonates with the idea of making learning more personalized and reflective as a countermeasure to the misuse of tools.

Side Dishes – Expanded Section

Below are sample *recipes* that can be used to advance your work as a professor. Each recipe is designed to help you begin your journey toward infusing AI into your classroom.

Scaffolding Inquiry with AI-Generated Guiding Questions

Preparation

Inquiry-based learning invites students to explore big questions—but they often need help framing and pursuing those questions productively. AI can generate scaffolding prompts, reflection questions, and exploratory tasks to guide their inquiry process.

Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold inquiry:

- Core concept or problem to explore
- Learning level (introductory vs. advanced inquiry)
- Inquiry structure (problem-based, project-based, research-based)
- Support structures (e.g., checkpoints, reflection logs)
- Inquiry outcome (report, prototype, argument, model)

Try this prompt in an LLM tool:

I am teaching a [student level] [subject] course using an inquiry-based learning model. Create a list of 5 scaffolded guiding questions for students exploring [insert topic]. Include one question that encourages metacognition and one that supports transfer to real-world applications.

Example Inquiry Chat

- What do we already know about this issue?
- What's a common misconception about it?
- What kind of evidence would strengthen our understanding?
- What perspectives or voices are missing in this conversation?
- How could what we're learning apply in your workplace or community?

Cleanup

Review AI-generated questions for clarity and inclusivity. Use a shared Google Doc or Jamboard to track student responses across the inquiry cycle. Ask students to generate follow-up questions using the AI as a co-inquirer.

Using AI to Support Tiered Reading and Content Access

Preparation

Students come to class with different reading speeds, comprehension levels, and language proficiencies. Generative AI can adapt course texts to multiple reading levels, generate summaries, and scaffold vocabulary in discipline-specific ways.



Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold reading comprehension:

- Source material (article, primary source, textbook excerpt)
- Reading level(s) or language access needs
- Desired output format (summary, vocabulary guide, outline)
- Bloom's level (e.g., comprehend, apply, analyze)
- Accessibility tools (text-to-speech, captioning)

Try this prompt in an LLM tool:

Summarize the following reading on [topic] into three versions:

- 1) at a 7th-grade reading level
- 2) in bullet-point format for quick review
- 3) with a vocabulary glossary of 5–7 key terms defined in context.
- 4) Also suggest one question students could answer after reading to check comprehension.

Example Reading Chat

Simplified Summary: “Cells are the building blocks of life. Each cell has parts that do different jobs, like turning food into energy.”

- *Bullet Points:*
 - Cells → smallest unit of life
 - Organelles → parts that do jobs
 - Mitochondria = power station
- *Comprehension Question:* What job does the mitochondrion do in the cell?

Cleanup

Always verify accuracy in simplified text and check for oversimplification. Offer students choice of format (full reading, summary, or audio narration). Encourage students to generate their own glossary or reword AI definitions.

Using AI to Design Scaffolded Writing Assignments

Preparation

Scaffolded writing teaches students to move from brainstorming to drafting to revising with structure and support. AI can help generate outlines, transitions, sentence starters, or even counterarguments—while students retain ownership of content.



Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold writing:

- Assignment format (essay, reflection, analysis, article)
- Writing stage (idea generation, outline, draft, revision)
- Citation requirements and academic honesty guidelines
- Genre or tone (persuasive, analytical, narrative, etc.)
- Student writing confidence and experience level

Try this prompt in an LLM tool:

I am assigning a [type of paper] in my [student level] [subject] course. Scaffold the assignment into 3 phases, with tasks for each stage. Also, generate an outline template and two sentence starters for students to use at the drafting stage

Example Writing Chat

Phase 1: Brainstorm & Research – Use AI to generate 3 possible paper topics and questions.

- *Phase 2: Outline* – Use AI to structure the paper: introduction, 3 body points, conclusion.
- *Phase 3: Draft & Revise* – Use AI to check for clarity or get suggestions for transitions.
- *Sentence Starters:*
 - “One possible explanation for this is...”
 - “A counterargument to consider is...”

Cleanup

Ensure students understand where AI assistance is appropriate and where it isn't. Ask students to submit a revision memo describing changes made and how AI, peer, or instructor feedback shaped the draft.

Using AI to Support Concept Mapping and Visual Scaffolds

Preparation

Concept maps, timelines, flowcharts, and diagrams help students organize knowledge and see relationships. Generative AI can help students build visual frameworks or generate sample maps they can revise, annotate, or compare.



Prompt Ingredients

Here are some things you might use when using Generative AI for visual scaffolding:

- Target topic or process (e.g., photosynthesis, supply chain, stages of development)
- Format (flowchart, cycle, map, timeline)
- Learning objective (sequence, compare, explain)
- AI prompt for visuals or structure
- Tools: Canva, Lucidchart, Miro, Google Slides, Whimsical

Try this prompt in an LLM tool:

I am teaching a [student level] [subject] course. Generate a concept map outline for the topic of [topic]. Include 3 main nodes, 2 subnodes each, and 1 connection or relationship per main node. Also suggest how students could annotate or expand on this scaffold.

Example Concept Mapping Chat

- *Main Node:* Causes of the French Revolution
 - Subnodes: Economic inequality, Enlightenment ideas
 - Connection: “These ideas challenged the monarchy's authority.”
- *Student Extension:* Add primary source quotes that illustrate each cause.

Cleanup

Review maps for historical accuracy or logical connections. Use as a warm-up or formative assessment. Ask students to submit a revised version with color-coding, added examples, or “what if?” branches.

Scaffolding Socratic Seminars and Discussions with AI

Preparation

Socratic seminars deepen learning through student-led inquiry and respectful dialogue. AI can help generate layered questions, thematic clusters, and discussion roles to support critical engagement—especially for learners new to the format.



Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold a Socratic seminar:

- Central text, theme, or problem (e.g., a case, primary source, or ethical dilemma)
- Discussion format (whole class, fishbowl, online forum)
- Student level and familiarity with discussion protocols
- Seminar goal (exploration, debate, connection, interpretation)
- Prep task (annotations, questions, quote responses)

Try this prompt in an LLM tool:

I'm planning a Socratic seminar for a [student level] [subject] course based on a reading about [topic]. Create a set of 3 opening questions, 3 deepening questions, and 2 cross-disciplinary connections. Also suggest discussion roles students can use.

Example Socratic Seminar Chat

- *Opening:* What does the author seem to value most?
- *Deepening:* How might someone from a different culture interpret this differently?
- *Connections:* How does this idea relate to social media today?
- *Roles:* Clarifier, Evidence Finder, Bridge-BUILDER, Challenger

Cleanup

Debrief with a written reflection: “What did you contribute? What surprised you?” Use AI to summarize key takeaways from transcripts (optional) or to suggest follow-up questions for asynchronous continuation.

Using AI to Create Lab Report Templates and Research Logs

Preparation

Scientific writing can be intimidating without clear models. AI can generate scaffolded templates, headings, guiding questions, and sample language to support students in writing labs, field notes, or research memos with confidence and clarity.



Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold lab reports or research logs:

- Report format (formal lab report, informal log, annotated results)
- Topic or experiment focus (e.g., titration, behavior observation)
- Student familiarity with technical writing
- Tools: Google Docs, Notion, LabArchives, Word templates

Try this prompt in an LLM tool:

Create a lab report writing template for a [student level] [discipline] course on [experiment/topic]. Include section headings, 1–2 guiding questions per section, and a sentence starter for the conclusion.

Example Lab Report Chat

- *Headings:* Introduction, Materials, Procedure, Results, Discussion, Conclusion
- *Guiding Questions (Discussion):*
 - What patterns do you see in your data?
 - Were there unexpected results? Why might that be?
- *Sentence Starter:* “The most significant outcome of this experiment was...”

Cleanup

Review templates with your department's format requirements. Emphasize original analysis—use AI only to clarify structure or brainstorm, not to generate entire sections. Have students reflect on writing growth across reports.

Using AI to Scaffold Guided Note-Taking and Study Guides

Preparation

Guided notes and study guides help students focus on key content and actively process lectures, videos, or readings. AI can support students in creating structured outlines, cloze-style notes, and personalized review materials.

Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold study skills:

- Source material (lecture, reading, video, slides)
- Format (outline, Cornell notes, cloze, Q&A sheet)
- Student needs (e.g., working memory, processing speed, multilingual learners)
- Course schedule or review goals

Try this prompt in an LLM tool:

Based on a lesson on [topic], generate a guided notes template for students. Include key headings, blank spaces for examples, and 3 review questions at the end. Also, suggest a way students could convert this into a personalized study guide.

Example Guided Notes Chat

- *Headings:*
 - Key Term: _____
 - Concept Explanation: _____
 - Real-Life Example: _____
- *Review Questions:*
 - What's the difference between X and Y?
 - Why does this concept matter?
 - What would happen if you changed this variable?

Cleanup

Model how to adapt AI-generated guides: add visuals, reorganize, or annotate collaboratively. Encourage students to teach a peer using their guide or to quiz themselves using the review questions.

Scaffolding Collaboration Across Group Projects

Preparation

Group projects require clear roles, checkpoints, and communication. AI can support by generating role descriptions, meeting agendas, progress check-ins, and peer evaluation prompts—helping groups stay organized and accountable.

Prompt Ingredients

Here are some things you might use when using Generative AI to scaffold group collaboration:

- Project topic and timeline

- Group size and modality (in-person, hybrid, async)
- Communication tools (Google Drive, Slack, LMS groups, Notion)
- Roles (coordinator, researcher, editor, presenter)
- Conflict resolution strategies

Try this prompt in an LLM tool:

I'm assigning a group project in a [subject] course. Generate a collaboration plan with 4 student roles, 2 project milestones with suggested due dates, and a short peer feedback form for group reflection.

Example Collaboration Chat

- *Roles:*
 - Project Manager: Organizes deadlines and communication
 - Research Lead: Collects and synthesizes sources
 - Content Developer: Drafts initial text/media
 - QA Reviewer: Proofreads and tests final product
- *Milestones:*
 - Week 2: Annotated bibliography and outline
 - Week 4: Draft for peer review
- *Peer Feedback Form:*
 - One thing my team did well: _____
 - One thing we could improve: _____
 - My contribution this week was: _____

Cleanup

Provide scaffolds for conflict resolution or communication norms. Use AI to generate team contracts or status update prompts. Emphasize reflection on group dynamics, not just project outcome.

By using AI to thoughtfully scaffold your course content and assignments, you help students build confidence and competence step by step. The AI can function like a brainstorming buddy, reminding you of intermediate steps and supports you might otherwise overlook when you're very familiar with the material (we teachers can sometimes forget what it's like to learn it from scratch). Ultimately, well-scaffolded learning experiences lead to higher success on those Main Dish assessments and better knowledge retention. Now, with main and side dishes covered, let's indulge in some Desserts – creative extensions and synthesis that allow students to cap off their learning in enjoyable and imaginative ways.

Chapter 7: Desserts

Creative Extensions & Synthesis with AI

Desserts are often the favorite part of a meal – they’re fun, creative, and leave a lasting impression. In our course context, “Desserts” represent creative extensions and synthesis activities – opportunities for students to use what they’ve learned in inventive or integrative ways, often toward the end of a unit or course. These could be bonus projects, cross-disciplinary explorations, or just imaginative takes on the content that reignite excitement. AI can inspire and even facilitate these creative endeavors, allowing both instructors and students to push boundaries and try novel applications of knowledge.

Brainstorming creative project ideas. If you want to offer an optional enrichment project or a final cumulative assignment that encourages creativity, try using AI to generate ideas. For example: *“Give me some creative project ideas for a final assignment in a Visual Arts course that also integrates knowledge from History.”* The AI might come up with: “Ask students to create an artwork in the style of a past era (Renaissance, Impressionism, etc.) that comments on a modern issue – effectively blending historical art techniques with contemporary themes, and accompany it with a short essay linking the two ([Using AI in Universal Design for Learning | Edutopia](#)).” Or for a Biology class: *“Suggest a creative extension activity for a biology class studying ecology.”* It could suggest: “Have students write and illustrate a children’s storybook about an ecosystem, accurately including the roles of various organisms and the flow of energy. This synthesizes their knowledge into a form a child could understand.” Such projects let students demonstrate understanding in non-traditional formats (art, story, design), which can be more engaging for them and showcase talents beyond test-taking. AI’s suggestions might be things we wouldn’t immediately think of – maybe a game design, a mock public service announcement, or a diary from the perspective of a historical figure/scientific concept.

Cross-disciplinary synthesis. AI shines at connecting dots between fields because it has digested information from all over. You can leverage that by asking for interdisciplinary project ideas or examples. For instance, *“How can I incorporate psychology into a final project for a Business course?”* AI might propose: “Students design a marketing plan (business) that explicitly uses principles of human behavior and decision-making (psychology) learned from the course, then write a brief explaining the psychological rationale behind their strategies.” Similarly, a Chemistry and Visual Arts crossover could be: “Students create a series of chemical reaction ‘art’ (like colorful reactions or crystal growths), photograph them, and explain the chemistry behind the aesthetics.” The idea is to encourage students to bring in their interests or other

disciplines – AI can churn out many cross-pollination ideas, among which you might find one that excites your class.

Incorporating AI tools as part of the creation. Since this chapter explicitly involves AI, consider assignments that require using an AI (ethically and with reflection). For example, in a Creative Writing course, a dessert assignment might be: “Co-write a short story with ChatGPT – the student writes one paragraph, the AI writes the next, alternating, then the student edits the final story to ensure coherence and adds their own ending. Reflect on the process and how the AI’s contributions helped or hindered the creative process.” This is a fun, experimental way to both use AI and critically evaluate it (fulfilling a kind of AI literacy goal). In a Music class, maybe students use an AI music generator to create a melody, and then they have to arrange or perform it with improvements. The key is that these extensions are low-stakes or exploratory – desserts, not the main grade – so students can indulge their curiosity with AI and creativity without fear.

Showcasing and celebrating. Desserts in a meal are to be savored, and likewise, these creative projects can be showcased. AI can help in planning an exposition or a sharing event. For example, ask: *“What’s a good way to have students share their creative final projects with each other in an online course?”* The AI might suggest creating a virtual gallery or a mini conference on Zoom where each student presents for 3 minutes or compiling a class magazine. If you have a Visual Arts or Design class, you could actually use AI image generation (with caution around copyright as discussed later) as part of a final gallery – perhaps have students each generate an image using a prompt they devised that relates to course themes and include it in an online exhibition with their commentary. This blends AI tool use with their understanding of style, composition, and related concepts.

Gamification and fun extras. AI can help gamify content as a creative extension. For instance, *“Help me create a trivia game or escape-room style challenge for reviewing all the key concepts of the course.”* The AI could generate a storyline and puzzles that incorporate your content. Perhaps for History, an escape room scenario in which solving historical clues unlocks the next step. You’d still have to adapt and verify, but it gives a starting narrative and puzzle ideas. Students often find these game-like syntheses enjoyable and memorable. You could even involve students in creating the game as a project (like each group makes one part of an escape room or a set of quiz questions for a big trivia game).

Creative reflection. Synthesis can also be introspective. AI can propose more engaging reflective prompts than “write a reflection.” For example: *“Give a creative prompt for students to reflect on their growth over this course.”* It might say: “Imagine you could travel back to the

first day of class and give your past self one piece of advice or insight about this course. Write a short letter conveying that.” Or, “Describe your learning journey in this course as a story or metaphor (perhaps as a climb up a mountain, with challenges and triumphs).” Such prompts allow students to synthesize their experience and learning in a creative narrative form, which can be more meaningful than a standard evaluation form. AI, having seen many reflective prompts, can offer some that spark student imagination.

Artistic and alternative formats. We can encourage students to use mediums beyond writing: video, audio, art, etc. If they need ideas, AI can list possibilities. For example: *“What are some alternative formats students could use to present their final research findings, aside from a written report?”* It might suggest: “Poster presentation (with visuals), video documentary, podcast episode, infographic series posted to a blog, a mini-teach (teaching the concept in a recorded mini-lesson), or a simulated newscast.” Some of these might be viable depending on your class context and resources. Even if not, it might inspire the student who hates writing to propose an approved alternative (like recording a podcast), which you could allow if it meets the criteria. The result is potentially more engaging for them and maybe more fun for you to grade!

Example – creative extension (Psychology). Perhaps after a semester of studying theories of personality, a creative extension could be: “Design a fictional character (or choose one from literature/film) and create a detailed personality profile for them using at least two psychological theories we studied. For bonus fun, you can ‘interview’ the character with an AI chatbot role-playing as that character to gather information (if you like), but the final analysis must be yours.” This kind of assignment lets them synthesize multiple theories (trait theory, Freudian, humanistic, etc.) in a creative context. They could share their character profiles in a class forum, essentially creating a gallery of psyche analyses of various well-known characters or original creations. It’s a dessert because it’s imaginative and not a traditional exam, but it solidifies their understanding by applying theory to a comprehensive case.

Enjoyment with a purpose. The “dessert” activities, while fun, should still have a pedagogical point – often to encourage higher-level thinking, such as synthesis, evaluation, or creative application. AI can help ensure that by the way you prompt it. For instance, explicitly say “creative extension to practice applying concepts X, Y, Z in a novel way.” That way, its suggestions (and your eventual assignment framing) tie back to learning outcomes rather than just being random fun. That said, sometimes a little random fun is okay! Perhaps you dedicate the last class to a playful AI-driven activity like “who can prompt the AI to generate the best rap summary of our course topic” – a light competition that brings humor and a recap of learning. Use AI to generate an example rap or judge criteria. It might be silly, but it fosters a positive class atmosphere and helps students recall key points in a new format.

Through these creative extensions, enhanced by AI, students often discover new connections and personal relevance in the material. They also end the course on a high note, having created something uniquely theirs. As an instructor, you get to see your students' knowledge displayed in diverse forms – which can be incredibly rewarding. It's like the sweet finish after a substantial meal, reinforcing and celebrating all that was learned.

Desserts – Expanded Section

Below are sample *recipes* that can be used to advance your work as a professor. Each recipe is designed to help you begin your journey toward infusing AI into your classroom.

[Using AI for Digital Storytelling and Creative Writing](#)

Preparation

Creative synthesis through storytelling builds empathy, systems thinking, and personal connection to course concepts. AI can help students brainstorm plotlines, generate dialogue, or simulate alternate perspectives—without taking over authorship.

Prompt Ingredients

Here are some things you might use when using Generative AI for digital storytelling:

- Target concept or theme (e.g., climate change, ethical dilemma, historical event)
- Format (short story, digital comic, interactive narrative, podcast monologue)
- Student comfort with creative expression
- AI-supported tasks (dialogue, plot brainstorming, world-building)

Try this prompt in an LLM tool:

Design a creative storytelling assignment for a [student level] [subject] course on [topic]. Include 2 format options (e.g., short story, digital media), ways students can use AI to enhance—not replace—their ideas, and a reflection prompt about audience and tone.

Example Storytelling Chat

- *Prompt:* “Write a short story from the perspective of a molecule, historical figure, or ethical AI assistant.”
- *AI support:* Use ChatGPT to generate sample settings, brainstorm twists, or simulate in-character dialogue.
- *Reflection:* “Who is your intended audience? What message or emotion are you hoping to convey?”

Cleanup

Use AI to suggest multiple endings or alternate perspectives, which students can analyze or rewrite. Clarify authorship: AI is a collaborator, not a ghostwriter. Ask students to annotate where they used AI and how they edited it.

Creating Multimodal Portfolios with AI Tools

Preparation

Portfolios allow students to showcase learning across modes—text, visual, audio, video. AI tools can support creation of content, templates, and curatorial statements while students remain the primary designers of their showcase.



Prompt Ingredients

Here are some things you might use when using Generative AI to support portfolio creation:

- Core course objectives and artifacts (papers, projects, reflections)
- Tools/platforms (Google Sites, Canva, Notion, Adobe Express, Wakelet)
- Desired audience (instructor, peer, public)
- Optional AI supports (image generation, summaries, voiceover)

Try this prompt in an LLM tool:

Create a final synthesis portfolio assignment for a [student level] [subject] course. List the 3 types of artifacts to include, ways students can use AI tools to enhance visual or textual presentation, and a final reflection prompt that connects their learning across the course.

Example Portfolio Chat

- *Include:*
 - One project revised with feedback
 - One visual or multimedia artifact
 - A “Letter to My Future Self” reflection
- *AI support:* Generate a visual theme, create a 1-paragraph summary of each artifact, or draft voiceover scripts for slides.
- *Reflection:* “How has your thinking changed since the first week of class?”

Cleanup

Review final portfolios for accessibility (captions, alt text, contrast). Require an AI Use Disclosure Statement (1–3 sentences) and ask students to cite tools used. Celebrate the final product in a course gallery or showcase.

Designing Course Wrap-Up Activities Powered by AI

Preparation

Course conclusions should reinforce what students learned and help them connect concepts to future applications. AI can assist with reviewing key topics, generating analogies, or scripting creative course summaries.



Prompt Ingredients

Here are some things you might use when using Generative AI to design course wrap-ups:

- Core concepts, themes, or projects to revisit
- Format of the review (visual, audio, writing, presentation)
- Student expression preferences (humor, reflection, synthesis)
- Use of AI for summarizing, scripting, or brainstorming

Try this prompt in an LLM tool:

Suggest a creative course wrap-up activity for a [student level] [subject] course. It should invite students to review and reflect on the course's key concepts using AI as a support tool. Include 2 different submission formats (e.g., sketchnote, rap, journal entry).

Example Wrap-Up Chat

- *Activity:* “Ask AI to help generate a poem, meme set, or mini-podcast script summarizing your top three takeaways from the course. Edit and personalize before sharing.”
- *Formats:* Sketchnote or digital collage + reflective caption; short podcast or narrated slide deck
- *Prompts:* “Summarize this course as a food dish.” / “What’s the playlist for your semester?”

Cleanup

Use AI only to kickstart—not complete—final projects. Emphasize tone: these wrap-ups should be expressive, accurate, and inclusive. Consider offering a public or peer gallery with optional anonymity.

Facilitating AI-Assisted Reflection and Showcase Projects

Preparation

Reflection helps students synthesize what they've learned and why it matters. AI can generate reflection starters, categorize themes across journals, or help students prepare final presentations that connect personal growth with academic progress.

Prompt Ingredients

Here are some things you might use when using Generative AI for reflective synthesis:

- Weekly journals or discussion posts
- Final course artifact or capstone
- Tools for presentation (Google Slides, video editors, Adobe Spark)
- AI for summarizing trends or generating taglines/thesis statements

Try this prompt in an LLM tool:

I want students to create a reflective synthesis project at the end of a [student level] [subject] course. Suggest 2 presentation formats, 3 reflection prompts, and one way they might use AI to identify patterns or taglines in their own writing.

Example Showcase Chat

- *Formats:*
 - Video essay using Canva
 - Digital zine with reflection quotes + visuals
- *Prompts:*
 - “What are 3 values you practiced or challenged in this course?”
 - “Which learning moment surprised you most?”
 - “How did you change as a thinker?”
- *AI task:* Feed journal entries to an LLM and ask, “What themes are showing up most?”
Students then verify and reflect on that list.

Cleanup

Model how to cite and fact-check AI’s analysis of student writing. Encourage students to share showcase projects with peers or community partners, depending on the format and their privacy preferences.

Now, as our multi-course journey nears its end, we have one final course to address: Cleanup. Before we conclude, we must consider how to manage any messes or challenges – whether AI missteps, student misuse, or lessons learned for next time. Let’s move to the Cleanup chapter to ensure we know how to handle the occasional burnt dish or spilled milk in our AI-enhanced teaching kitchen.

Chapter 8: Cleanup

Managing Challenges, Misuse & AI Failures

Even the best meals can leave a mess in the kitchen. In our AI Teaching Kitchen, “Cleanup” refers to addressing the challenges, failures, and misuse that can arise from integrating AI into teaching and learning. It’s crucial to be prepared for when things don’t go as planned – whether that’s the AI giving incorrect info, students over-relying on it or cheating, technical hiccups, or ethical dilemmas. This chapter offers strategies and best practices for managing those situations, ensuring that our use of AI remains a positive and productive force in the classroom.

When AI gives wrong or biased answers. As we’ve reiterated, AI can hallucinate false information or exhibit biases. How do we handle this in practice? First, preemptively, you can minimize such issues by testing prompts yourself before giving them to students. If you spot a likely error, warn students (“AI might mention X, but remember in class we saw that’s inaccurate.”). However, if you or a student encounters a blatant mistake in real-time (say, during a class demo or in a student’s AI-assisted work), use it as a teachable moment. Emphasize the “Assistance, not Authority” - the AI is a tool to be questioned, not an oracle. Encourage students to double-check AI-generated content against textbooks or other sources. If bias appears (perhaps the AI’s examples consistently use a certain stereotype), call it out and discuss why the AI might reflect that bias (training data). This fosters critical digital literacy. From a policy standpoint, remind students that they are responsible for the final content they submit – “the AI said so” is not an excuse for incorrect answers. Kutztown’s policy clearly states users must verify outputs and are accountable for them. In practice, you might adjust grading to consider that any fact presented needs a citation or rationale, whether AI helped produce it or not.

Handling academic misuse (cheating with AI). Despite our best efforts to ensure authentic, engaging tasks, some students may attempt to use AI in unauthorized ways. For instance, if a student turns in an essay that seems suspiciously AI-written (too generic, lacking personal voice or course-specific details), approach it like any plagiarism case. Tools exist that claim to detect AI writing, but they are not fully reliable and can flag false positives. Rather than relying solely on those, look for qualitative signs: does the work meet the assignment in detail? Is there a sudden shift in style from the student’s previous work? You can have a conversation with the student: ask them to explain parts of their submission or how they arrived at their answers. Often, if they solely used AI without learning, they might struggle to do so. Kutztown’s Acceptable Use Policy prohibits using AI for “misrepresentation” – that includes submitting AI work as one’s own. It’s an academic integrity violation. The same process for plagiarism applies - document your evidence and follow KU’s academic honesty procedures. One proactive step is to incorporate oral components as mentioned: for example, after a paper, do a short viva or presentation. If a student wrote something themselves (with or without AI assistance properly used), they’ll be able to discuss it. If not, it will be apparent. On the flip side, make sure students who *do* use AI appropriately (according to your guidelines) don’t get unfairly penalized by automated detectors.

or suspicion. Creating a class culture where students feel comfortable disclosing AI assistance in an academic way (e.g., as a citation or author's note) can protect those acting in good faith.

Technical glitches and access issues. Sometimes AI tools might be down (ChatGPT can be at capacity, etc.) or a feature changes mid-course. Always have a backup plan for activities reliant on AI. For instance, if you planned an in-class exercise with an AI and it fails, have an alternative (maybe a pre-generated output or an offline version of the task). It's similar to having a plan if the internet goes out during a high-tech lesson. Additionally, not all students may have equal access to devices or accounts needed for certain AI tools. Address this by checking at semester start: if using external AI platforms, ensure every student can create an account or provide an alternative (some tools might not be available in certain regions, or some students may be uncomfortable using them). If a student cannot or prefers not to use a tool for a valid reason (privacy, disability compatibility, etc.), offer a substitute way to complete the task that achieves the same learning outcome. Inclusivity includes tech access.

AI's impact on grading and feedback workload. One reason to use AI is to help with grading or creating feedback. But be cautious: if you use AI to draft feedback comments or summarize student work, double-check everything. Do not use AI to assign grades on its own; that would be delegating judgment that only a human instructor should make (and likely against policy unless as a formal pilot). If AI helps generate a feedback template (e.g., "common strengths and weaknesses in this assignment" to speed up your commenting), ensure it accurately reflects each student's submission. The responsibility is still yours. Also, if you adopt an AI-driven tool (like some LMS integrations that attempt automated essay scoring or hint generation), monitor its performance and solicit student input on its helpfulness. Sometimes these can misfire, and you'll need to adjust or discontinue use.

Staying within ethical and legal lines. Remind yourself and your students about data privacy laws (FERPA, etc.) – don't have them paste classmates' posts or any identifying student info into external AI tools. If peer review is done via AI, anonymize the work first. Keep an eye on the license or usage terms of any AI tools – for instance, if a tool retains and uses what's input, that's not ideal for sensitive data. The White House's AI Bill of Rights principle on data privacy and notice is relevant: students should know how their data might be used by these tools. Transparency is key.

Student concerns and misconceptions. Some students might feel using AI is "cheating" even when you encourage it for certain tasks. Be very clear in differentiating *appropriate use* versus *misuse*. Provide examples: "It's okay to use Grammarly or ChatGPT to help you polish your essay's grammar and even to get ideas flowing – that's similar to getting help from a writing center – but it's not okay to have ChatGPT write the whole analysis for you. For instance, you should not just input the essay prompt and submit what it gives you. Use it, don't let it replace you." Also discuss attribution: if they use AI for a substantial portion, how should they note that? We are in evolving territory, but an author's note or a footnote can suffice for now (e.g., "Portions of this summary were generated with the assistance of AI."). Normalizing that is better than pushing it underground. Conversely, some students might over-trust AI (especially if they

think you, as the instructor, endorse it). We must consistently model skepticism and verification. If an AI-made error comes up in class, openly correct it and mention why it's important to critically evaluate AI output. Students will take cues from you on how to regard these tools.

Continuous improvement and staying updated. The AI landscape changes rapidly. A challenge is that what worked one semester might change the next (tools get better or worse, or new ones appear). Adopt a mindset of continuous learning. Engage with faculty development (like KU's workshops or communities on AI in teaching) to share experiences. If an AI truly failed you in some way (e.g., by providing culturally insensitive content that upset students), report it to the tool provider, if possible, and adjust your usage or settings. Many AI systems allow users to provide feedback on outputs to improve them. In class, if something goes awry, be honest: "That didn't work out as I expected; let's talk about why." Students appreciate real-time problem-solving, and it humanizes the experience – you're learning too, albeit about AI usage.

Stress human value. Cleanup is also about reflection on when *not* to use AI. Encourage yourself and students to consider: did AI actually help us learn better here, or did it just make something faster? For example, if AI can answer all our low-level recall questions, maybe we should focus class time on higher-level discussions. If AI can generate 50 practice problems, maybe we should spend time teaching how to discern which problems are worth practicing. Use challenges as insight: a misuse incident might prompt a tweak in your assignment design next time (perhaps more personalization). An AI error might lead you to compile a list of "AI pitfalls in our subject" that you share with future classes, so they avoid them.

In essence, managing AI in education is an ongoing process. As an instructor, you become not just a content expert but a coach in digital literacy and ethics. By anticipating issues and addressing them transparently, you will maintain a trusting and productive classroom environment. The cleanup might involve some extra elbow grease now and then, but it ensures that our AI-enhanced cooking remains healthy and hygienic, so to speak.

Cleanup – Expanded Section

Below are sample *recipes* that can be used to advance your work as a professor. Each recipe is designed to help you begin your journey toward infusing AI into your classroom.

Responding When AI Gets It Wrong

Preparation

LLMs can generate subtle, plausible, and confidently wrong errors. These "hallucinations" must be addressed to maintain accuracy and trust in your classroom. Build awareness of these issues into your activities and model critical evaluation with students.

Ingredients

Here are some things you might use when helping students respond to AI inaccuracies:

- Examples of incorrect or misleading AI responses
- Assignments that require fact-checking

- Citation tools or databases for comparison
- Discussion prompts about source reliability
- Transparent modeling of error correction

Try this prompt in an LLM tool:

Generate a plausible but factually incorrect answer to this question: [insert topic-related question]. Also, generate a corrected version and a reflection prompt that students could use to compare the two responses.

Example Cleanup Chat

- *Incorrect Answer:* “Marie Curie discovered penicillin.”
- *Corrected Answer:* “Marie Curie discovered radioactivity. Penicillin was discovered by Alexander Fleming.”
- *Reflection Prompt:* “What steps could you take to verify facts before using information in a project?”

Cleanup

Turn mistakes into teachable moments. Have students create “AI fact-check stations” or quizzes that include one LLM-generated inaccuracy to identify. Reinforce verification habits and reference-checking as part of academic integrity.

Addressing Overreliance on Generative AI

Preparation

As students grow comfortable with AI, some may rely on it too heavily for ideas, structure, or even answers. Establish clear boundaries and self-regulation routines to ensure that AI is a tool—not a substitute for thinking.



Prompt Ingredients:

Here are some things you might use when helping students manage AI overuse:

- Examples of AI-generated vs. human-authored work
- Reflection logs on when/why AI was used
- Self-check questions for independence
- Guidelines for attribution and tool citation
- Comparison activities or metacognitive journals

Try this prompt in an LLM tool:

I’m designing a reflective activity on student overreliance on AI tools. Create 3 journal prompts that help students evaluate when AI is useful vs. when it undermines learning. Include a sample self-check question students could use.

Example Cleanup Chat

- *Prompts:*
 - “What part of this assignment did you complete yourself vs. with AI? Why?”
 - “Did using AI improve your understanding or replace the need to think through the content?”
 - “What will you do differently next time you use AI for academic work?”
- *Self-Check:* “Can I explain this idea without using the AI-generated version?”

Cleanup

Encourage students to annotate where AI helped or inspired their thinking. Create a culture of disclosure rather than secrecy. Clarify that self-authorship and authentic learning remain the goal—even in an AI-enhanced world.

Managing Academic Misuse or Misrepresentation

Preparation

Whether accidental or intentional, AI misuse (e.g., uncredited work, fabricated sources, copied answers) must be addressed through clear communication and fair processes. Use AI policies to guide conversations around academic honesty.



Prompt Ingredients:

Here are some things you might use when addressing AI misuse:

- Institution’s AI Acceptable Use and Academic Integrity Policies
- Clear syllabus statements about allowable AI use
- AI detection tools (used cautiously and contextually)
- Misuse response form or documentation template
- Reflective remediation tasks or coaching conversations

Try this prompt in an LLM tool:

Generate a sample reflection prompt for a student found to have misused AI on an assignment. The prompt should help the student explore why they made the choice and how they can rebuild academic integrity going forward.

Example Cleanup Chat

- *Reflection Prompt:*

“Describe the circumstances that led you to submit work generated by AI without attribution. What impact did this have on your learning, and how will you approach future assignments differently to reflect your values and our academic community?”

Cleanup

Avoid punitive assumptions. Encourage growth through discussion and reflection. Use a learning contract or “AI use journal” in future assignments as a monitoring and coaching tool. Consider restorative academic practices where appropriate.

Reflecting on AI Use as a Faculty Member

Preparation

Faculty members need space to evaluate their own evolving AI practices. Use reflective tools to assess what worked, where AI helped or hindered, and how you might adapt future courses for better integration, clarity, and ethics.



Prompt Ingredients:

Here are some things you might use for personal reflection on AI use:

- A semester-end faculty AI use checklist
- Student feedback (mid-course + final reflections)
- AI-facilitated self-interviews or journaling
- Use logs or tracked activities from your LMS or notes
- A “next-semester” plan with updates to policies, activities, or assessments

Try this prompt in an LLM tool:

Generate 3 reflective questions a faculty member could answer at the end of a semester after using AI tools in teaching. Include one question that encourages thinking about student impact and one that focuses on instructional design.

Example Faculty Reflection Chat

- What surprised you about how students used (or misused) AI in your course?
- Which activities or assessments felt most authentic in an AI-enhanced environment?
- What would you change next semester to improve your integration of generative AI?

Cleanup

Block time for a brief debrief with peers or your teaching & learning center. Archive successful prompts, rubrics, or AI-supported lessons. Consider submitting a reflection to your department, a teaching blog, or an AI teaching community.

With this, our core chapters conclude. You have navigated the full menu from preparation to cleanup. Next, we provide additional resources – the **Main Courses: Course Facilitation** recipes in detail, an **Elevated Recipes** section with advanced examples, and special topics on research, publishing, and intellectual property. These will serve as reference sections to deepen your practice. But even if you stop here, you have a comprehensive set of strategies and examples to begin (or refine) your journey of teaching with AI. Remember that at the heart of all of this is *good teaching*. AI is a powerful new ingredient, but it’s the chef – you – who brings it all together into a nourishing experience for students. Happy cooking!

Elevated Recipes

Authentic Assessment & Advanced AI Activities

In this “Elevated Recipes” section, we showcase advanced examples of incorporating AI into authentic, often semester-spanning assessments and activities. These are called “elevated” because they build on basic recipes, adding layers of complexity, much like a gourmet twist. Inspired by the UF Tech Byte on elevated AI recipes ([Articles - Recap of Tech Byte: Elevated AI Recipes to Encourage Authentic Assessment - Center for Instructional Technology and Training - University of Florida](#)), each example here follows a transparent assignment template (purpose, tasks, criteria) and integrates AI in a meaningful way to enhance authenticity. These are not one-size-fits-all; rather, they serve as models that you can adapt to your context. Each elevated recipe includes a brief description and its **purpose** (why it’s valuable for learning), the role of **AI in the assignment**, the major **tasks** students will do, and the **criteria for success** (often using a TILT-informed structure). Use these as inspiration for capstone projects, cumulative assignments, or innovative assessments that prepare students for real-world applications of course content.

- **Elevated Recipe: Assignment Template & AI Policy Statement – Purpose:** Provides a universal template for assignments that clearly communicates Purpose, Tasks, Resources, and Criteria for Success to students, following the TILT framework. In addition, it includes an “AI Usage Policy” section clarifying if and how students should use AI in the assignment. *AI in this Assignment:* None directly, but it sets expectations (e.g., “AI-Permitted: You may use generative AI for brainstorming and proofreading, but all sources must be cited, and original analysis must be your own” or “No AI: This project assesses your personal skills, do not use AI tools for any portion” with rationale. *Tasks:* Instructor fills in this template for each major assignment; students follow it to complete their work, always knowing what is expected. *Criteria for Success:* Students understand exactly how they will be evaluated (rubric or description provided).

Use case: This template was used at UF to introduce assignments in the Elevated Recipes section, ensuring transparency and addressing AI up front. You can create your own version of it and use it consistently – it not only helps students but also forces you to think through each aspect of an assignment’s design, including ethical AI use.

- **Elevated Recipe: Introductory AI Discussion – Purpose:** Kick off the course by both building community and introducing AI literacy. Students use AI to create a fun artifact about themselves, then share it, thus demystifying AI early. *AI in this Assignment:* Students are explicitly permitted (and guided) to use a generative AI tool (like Microsoft Bing Image Creator or ChatGPT) to produce a small creative piece (e.g., an image or short poem that represents them). *Tasks:* Log into the AI tool (with provided instructions), follow a prompt to generate the artifact (the UF example gave options like a poem, song lyrics, short story, or image that represents something important to the student), possibly iterate a bit to get a satisfying result, then post both the AI-generated

content and a brief introduction of themselves to a discussion board. Then comment on peers' posts. *Criteria for Success:* Full credit for posting a prompt + AI output and a respectful engagement with classmates' posts. The emphasis is on participation and reflection rather than grading the creative output.

Why it's elevated: It seamlessly integrates AI use into a get-to-know-you activity with a pedagogical aim of making students comfortable with AI (and highlighting that AI can be used creatively, not just for cheating concerns). It also segues into a discussion of ethical use (e.g., citing AI output and recognizing its limitations in truly "knowing" the student).

- **Elevated Recipe: AI Literacy Assignment** – *Purpose:* Help students critically evaluate generative AI in the context of their discipline, fulfilling a digital literacy or ethics learning outcome. *AI in this Assignment:* Students actively use AI tools and/or analyze AI-generated content as part of the assignment, gaining first-hand insight. *Tasks:* For example, in a journalism class, a task could be: "Use an AI (ChatGPT) to write a draft of a news article on [topic]. Then, write a critique of that draft: identify factual errors, biases, or stylistic issues, and discuss whether an audience could tell it's AI-written." Alternatively, in a computer science ethics module: "Research an instance where AI caused harm or controversy. Prompt an AI to explain that incident, then evaluate the completeness and accuracy of its explanation." Students might have to refer to external sources (the "Resources" section encourages using class readings on AI ethics). *Criteria for Success:* Students are evaluated on their critical analysis and understanding of AI's capabilities and pitfalls, not on the AI's output itself. A rubric may include elements like demonstrated understanding of AI limitations, effective use of evidence from class or case studies, and depth of reflection on ethical implications.

Why it's elevated: It moves beyond treating AI as a content helper – the AI becomes the *subject* of inquiry, aligning with the idea that modern education should incorporate AI literacy. It prepares students to thoughtfully use (or not use) AI in their academic and professional lives.

- **Elevated Recipe: AI Debate Activity** – *Purpose:* Engage students in an authentic debate or deliberation activity where AI provides an opposing argument or data, thereby sharpening students' argumentation and critical thinking. *AI in this Assignment:* The AI is configured to take a stance opposite to the student or group. For example, in a business law class, students must argue a case against an AI "lawyer" that always counters their points. *Tasks:* Students prepare by researching their side. During the activity, they interact with the AI (through a chat interface or moderated by the instructor) that presents counterarguments. Students must respond in real-time to the AI's challenges, essentially debating with it. (Alternatively, two students debate and AI serves as the "judge" – giving a verdict based on arguments, though this is more experimental.) *Criteria for Success:* Success is measured by the quality of the student's arguments, use of evidence, and ability to refute the AI's points. This could be pass/fail for participation

or could involve a reflective write-up post-debate summarizing their strategy and what they learned from the AI's points.

Why it's elevated: This is an innovative use of AI to simulate a high-pressure, real-world scenario (debating an opposing counsel, convincing a skeptical stakeholder, etc.). Students often find it motivating to “beat” the AI or at least match wits with it, and in doing so, they must deeply understand the content. It’s essential to frame it as a learning process, not just a game – the reflection afterward helps solidify the knowledge and meta-cognitive awareness of debating strategies.

- **Elevated Recipe: AI Tutoring & Reflection – Purpose:** Encourage students to actively fill their knowledge gaps and reflect on the learning process by using an AI tutor. *AI in this Assignment:* The AI acts as a personal tutor or practice partner for a period of time, after which students analyze the experience. *Tasks:* For a week, each student engages with an AI for at least 15 minutes a day to practice a skill – e.g., solving math problems, speaking in a foreign language (the AI can converse in that language), or answering review questions. They keep a log of their sessions: what questions or prompts they gave, and how helpful the responses were. At the end of the week, each student writes a short reflection or report: “What kinds of questions did you ask? How did the AI’s help compare to a human’s help? Give an example of something you learned or corrected via the AI. Also, identify any instance where the AI was misleading or wrong.” *Criteria for Success:* Based on the thoroughness of the log and depth of reflection. We’re not grading them on mastering all problems (the goal is the attempt and reflection). This could even be ungraded or low-stakes, focusing on growth.

Why it's elevated: It turns AI into a tool for metacognition. Students who earnestly use the AI tutor will likely improve, and those who reflect will become more aware of their learning process. It also surfaces issues to you: if many report the AI was wrong about X, you know to clarify X in class. It’s akin to a guided self-study program with AI, promoting self-regulation – a key skill.

- **Elevated Recipe: AI Case Study and Presentation – Purpose:** Provide a capstone project where students solve a realistic case with help from AI in gathering or analyzing information, culminating in a professional-style presentation or report. *AI in this Assignment:* AI is used as a tool for research (summarizing sources, generating data examples) or analysis (e.g., coding text, suggesting solutions) within the project. *Tasks:* Students are given (or they find) a complex case problem. For example, in an environmental studies class: a community’s water supply is contaminated – propose a solution balancing technical, economic, and social factors. Students can use AI to do things like summarize EPA guidelines, generate a table of remediation methods with pros/cons, or even role-play a community meeting to see potential objections. They then develop a solution and present it, citing all sources (including any AI-provided information, which needs verification). The final deliverable could be a report, an oral presentation, or a video. *Criteria for Success:* The solution must be well-supported,

feasible, and clearly communicated. Evaluation criteria include problem understanding, integration of evidence (with citations), creativity of solution, and quality of presentation. If AI were used for content, students must attribute and fact-check it (perhaps an appendix describing how AI was used).

Why it's elevated: It mirrors real-world problem-solving, where professionals might use AI tools among many resources. It's "authentic" in that students produce work akin to what a consultant or team might produce outside school. It also inherently tests a variety of skills: research, critical thinking, tech literacy, teamwork if done in groups, and communication. By requiring transparency in AI use, it reinforces ethical practice. This kind of project can be a showcase piece for students – evidence of them handling a complex issue with advanced tools.

These elevated recipes demonstrate the possibilities when we thoughtfully blend AI into higher-order learning tasks. They aim to challenge students, foster independence, and simulate professional workflows (debating, consulting, researching, creating). When implementing, be sure to provide guidance – e.g., examples of good reflective logs, templates for case reports, clear rubrics – so students understand that AI is a means, not an end. Always tie it back to learning outcomes: if the outcome is to improve writing, ensure the AI debate or AI tutoring exercise indeed involves substantial writing or analysis by the student. Where needed, coordinate with your institution's policies (e.g., some might require an academic honesty statement if AI is used in certain ways). With these precautions in place, elevated recipes can make your course truly cutting-edge and deeply engaging, preparing students for an AI-infused world while still meeting rigorous academic standards.

Elevated Recipes – Expanded Section

Below are four *Elevated Recipes*—advanced, integrative assessments or projects that use Generative AI meaningfully and ethically. Each recipe is designed for experienced faculty or those ready to try “chef’s special” challenges that push creativity, critical thinking, and student ownership.

[Elevated Recipe: Simulated AI-Driven Roleplay & Interview](#)

Purpose

This project blends narrative roleplay, critical thinking, and ethical analysis. Students engage in a simulated dialogue with an AI as a character, stakeholder, or system, then reflect on the implications of human-AI interaction in their field.

AI in this Assignment

Students use an LLM like ChatGPT to simulate a historical figure, professional expert, or system (e.g., “You are a hospital administrator...”). They script, guide, or conduct a conversation and then analyze its accuracy, limitations, and relevance.

Tasks

- Develop a guiding question or persona scenario (e.g., “Interview Galileo about modern science”).
- Prompt the AI to respond in character.
- Record the dialogue (via screenshot, transcript, or video narration).
- Write a reflection comparing the AI’s responses to course texts or real-world expertise.

Criteria for Success

- Clarity and creativity of the scenario
- Depth of questioning and engagement with the AI
- Critical reflection on the accuracy and ethical implications
- Proper attribution of AI contributions

Tweak-It Tips: (Adaptability Options)

Allow students to “correct” or annotate the AI’s inaccuracies. Invite them to use the transcript in a peer-reviewed ethics discussion or multimedia essay.

[Elevated Recipe: Authentic Advocacy Campaign](#)

Purpose

Students apply course concepts to design a campaign that targets a real-world audience. They create persuasive, accessible, and ethically sound content, using AI tools to draft, test, and refine messaging.

AI in this Assignment

Students may use AI to brainstorm slogans, simulate audience reactions, translate text, or analyze tone. AI should support—but not generate—the full message or design.

Tasks

- Identify an issue or cause related to course content (e.g., food justice, digital privacy).
- Define a real audience (e.g., first-year students, local city council).
- Create 3+ campaign assets (poster, explainer video, infographic, web page, social carousel).
- Submit a campaign strategy memo + reflection on design choices.

Criteria for Success

- Authentic integration of course concepts
- Accessibility and inclusivity of design
- Ethical use and citation of AI tools
- Real-world relevance and audience alignment

Chef’s Notes: (Pedagogical Insight)

This is ideal for service-learning, media literacy, or interdisciplinary synthesis. Encourage students to test their campaign using a class feedback loop or external peer review.

Elevated Recipe: AI-Ethics Roundtable or Podcast

Purpose

Students collaboratively explore tensions between innovation and responsibility. They synthesize research, propose policy, and present their ideas in a shareable format like a podcast, panel, or recorded debate.

AI in this Assignment

Students use AI to simulate opposing views, generate case examples, or script podcast segments. The AI is a conversational partner in developing arguments, not a participant in the final product.

Tasks

- Choose a current issue (e.g., facial recognition, predictive policing, AI in therapy).
- Create a discussion script or podcast outline using multiple perspectives.
- Record a panel (live or asynchronous), with clear roles and prepared evidence.
- Include a group ethics memo citing relevant policy, course frameworks, and personal stances.

Criteria for Success

- Balance of perspectives and quality of argumentation
- Use of supporting evidence and ethical reasoning
- Clarity, tone, and structure of recording
- Creative, accurate, and respectful use of AI inputs

 **Prompt Ingredients:**
Ask AI: "Generate three opposing positions on [topic], one libertarian, one utilitarian, and one equity-focused." Use this as your starter dialogue to refine, not replace, student voices.

Elevated Recipe: Showcase Week + AI Literacy Reflection

Purpose

This capstone-style event allows students to present their work and critically examine the role of AI in their creative, analytical, or technical process. It celebrates both product and process.

AI in this Assignment

AI is used for refining outputs, summarizing learning logs, or generating presentation scripts. Students reflect transparently on how they did—or didn't—use AI and why.

Tasks

- Submit a final project (portfolio, essay, performance, model, visual, etc.).
- Prepare a 3–5 minute showcase presentation or exhibit.
- Complete a reflective statement or video on "My Relationship with AI This Semester."
- Participate in an in-class gallery walk or virtual symposium.

Criteria for Success

- Quality of final deliverable (per course rubric)
- Depth and honesty of AI reflection
- Clarity and creativity of showcase
- Contribution to the class learning environment

Tweak-It Tips: (Adaptability Options)

Allow students to “audit” their own work: what percentage came from their own process vs. AI assistance? What would they do differently next time?

AI and Research

For faculty and students involved in research, AI can be both a tool and an object of study. This chapter provides guidance on integrating AI into the research process ethically and effectively. Generative AI can assist in *literature reviews* by summarizing large numbers of articles or suggesting relevant papers (via tools like Semantic Scholar's AI features). It can also help in *data analysis*: for example, using machine learning to detect patterns in datasets, or simply using natural language processing to code qualitative data. However, it's critical to remember that AI should complement, not replace, scholarly rigor. According to Kutztown's policy, researchers using AI to analyze or generate research data should follow the same ethical guidelines as with any method – meaning verification of results, transparency in method, and ensuring no violation of privacy or consent.

If you use AI to generate any content (like a draft of a survey or a transcript translation), double-check its accuracy. Many journals now require disclosure of AI assistance in research papers. A good practice is to include a line in your methodology or acknowledgments, such as: "We utilized [AI Tool] to assist with [specific task], and all outputs were verified for accuracy by the authors." Keep in mind issues of reproducibility: if an AI was used, could another researcher replicate that aspect? If not, lean toward methods that are more deterministic or document exactly how the AI was prompted/trained. Another consideration is data security: do not feed confidential or unpublished data into external AI services without ensuring it's allowed (the White House AI Bill of Rights principles on data privacy ([The White House Releases "Blueprint for an AI Bill of Rights](#)) apply here). Use on-premises or open-source AI tools for sensitive data whenever possible. On the flip side, AI itself can be a *research topic*. Students might analyze how an AI model performs on certain tasks or study societal impacts of AI in their field.

Encourage critical evaluation: e.g., a psychology student could research AI's effectiveness as a therapeutic chatbot (noting both potential and pitfalls).

In summary, AI can accelerate some research tasks – scanning literature, drafting code, formatting references – but researchers must remain vigilant about quality and ethics. By treating AI as a junior assistant whose work must be carefully reviewed (much like you'd review a new research assistant's work), you can leverage its strengths (speed, pattern recognition) while guarding against its weaknesses (lack of true understanding, possible inaccuracy). The result can be a more efficient research process and potentially novel insights – all achieved without compromising the integrity of the scholarly endeavor.

Publishing with AI

The publishing landscape is rapidly adapting to the presence of AI in writing and editing. As faculty consider using AI in preparing manuscripts, it's vital to do so transparently and in line with publisher and disciplinary guidelines. Many academic journals and publishers (like IEEE, Springer, etc.) have stated that AI cannot be listed as an author since it doesn't fulfill authorship responsibilities (e.g., accountability for content) ([Authorship and AI tools | COPE: Committee on Publication Ethics](#)). However, they often allow AI assistance in writing or editing as long as it is disclosed. For instance, Springer Nature's policy requires authors to mention any use of generative AI or AI-assisted technologies in the Methods or Acknowledgements section of the manuscript ([Assistive and generative AI guidelines for authors - Sage Publishing](#)). They might suggest wording like, "The authors used [Tool Name] (version X) to help draft the abstract and improve language clarity. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication." Following such guidelines is crucial to maintain transparency.

In terms of use, AI can help you *polish language* (it's like an advanced grammar/style check), especially if English is not your first language – but be cautious that it doesn't introduce any changes in meaning. It can also suggest *titles*, *compile references*, or *format* according to a style guide if prompted (though do check all references against the primary sources; AI sometimes fabricates citations or gets details wrong). What about AI for generating figures or data? If you use AI to create an illustrative figure, check the journal's policy – treat it like using any image generator or software: you might need to attribute the tool and ensure no copyright issues (some AI-generated images may derive from copyrighted training data). Also, some grant agencies and conferences now ask about AI usage in the work.

Familiarize yourself with guidelines like those by the MLA or APA for citing AI () if you include AI-generated text in student papers or other publications. From an ethical standpoint, remember the principle of *academic integrity*: the core intellectual contribution must be yours. Use AI for support (like a very advanced form of spellcheck or brainstorming partner), not as a ghostwriter of novel ideas. A good rule is: if AI provided any non-obvious content (beyond common knowledge), cite or acknowledge it. If it only helped rephrase your own ideas, disclosure is still advised but you might handle it as a general statement of editing assistance. Keep drafts and records of what you generated via AI and how you modified it – this can be useful if any questions arise during peer review.

Finally, be prepared that publishers might start requiring raw data or proofs to ensure authenticity (for instance, some now ask for copies of data or code for verification). By staying up-to-date with publishers' announcements (COPE, the Committee on Publication Ethics, has released guidelines on AI, for example ([Authorship and AI tools | COPE: Committee on Publication Ethics](#))) and erring on the side of caution and clarity, you can harness AI's help in getting your work publication-ready faster while safeguarding your reputation and that of your co-authors.

Copyright and Intellectual Property with AI

Navigating copyright and IP issues in the age of AI is complex but crucial. Both Kutztown's policy and evolving national guidelines provide some clarity. A key point: **AI-generated content may not be protected by copyright in the same way human-authored content is.** The U.S. Copyright Office has indicated that works created entirely by AI, with no creative input from a human, are not copyrightable ([AI-Generated Content and Copyright Law: What We Know - Built In](#)). Only the parts that involve human creativity (selection, arrangement, modifications) can be claimed. Therefore, if you use AI to generate an image or chunk of text that you plan to include in a publication or course material, be aware that you (or your institution) might not hold exclusive rights over that AI output. Moreover, Kutztown's AI policy emphasizes respecting existing copyrights: you should not use AI tools to try to bypass copyright (for example, asking an AI to produce a summary of a textbook chapter to avoid students buying the book could infringe on the author's rights). Also, feeding copyrighted material into an AI (even for seemingly innocuous purposes like translation or summary) might violate fair use if not done carefully. When in doubt, seek permission or stick to content you have rights to or that is openly licensed. Another aspect: if you create a unique AI model (say you train a machine learning model on data you collected), clarify IP ownership. Often, work-related creations are owned by the university but check Kutztown's Intellectual Property policies or your contract.

If students use AI to create content, consider having them license it under Creative Commons if appropriate (since their raw output might not be copyrightable, but their overall project could be). In assignments, you might teach students about licensing any AI-assisted creations and about citing image or text sources that the AI output might be drawn from (since AI can inadvertently plagiarize by reproducing parts of training data). Kutztown's policy explicitly warns that AI-generated content may lack copyright protection and that users are responsible for understanding the legal limitations and for attributing AI as a source, where applicable. In practice, this means: if a student uses AI to write a poem and then submits it to a contest, that contest might disqualify AI-written works; ensure they know that. Or if you use an AI-generated diagram in your lecture slides, add a note like "Diagram created with DALL-E 3 – not copyrighted" or whatever the tool's terms are. Also, watch for contractual terms of AI services: some claim ownership or broad rights over anything you generate (or they at least get a license to use it). For instance, images generated on certain platforms might be used by the company for their training unless you opt out or have a pro license. Always read the terms, especially if using them in research or materials that will be distributed.

Finally, a special note on students: If they produce something with AI for a class, clarify if they can later publish it or if you plan to share it. Make sure no inadvertent sharing of student IP happens via AI tools. In essence, approach AI-related content as you would a collaboration with another creator: get clear on who owns what, ensure permission for use, attribute contributions, and be mindful that the legal system is catching up – so staying informed is your best strategy. Encourage discussions on this in class too; it's a learning opportunity for everyone about digital citizenship and intellectual property in our new era.

Prompt Library and Indexes by Course Goal and Tool

(In this closing section, we provide a handy “prompt library” and index to help you quickly find or create the right prompt for a specific teaching goal or to identify which AI tools suit a particular task. This is meant as a quick-reference appendix.)

Prompt Library. Below is a collection of editable prompt templates organized by common teaching objectives. You can copy, paste, and tailor these in your interactions with AI to generate content or ideas.

- *Design an Icebreaker:* “Generate 3 icebreaker questions or short activities for [class context]. (Class context: [size], [subject], [level]). Make them inclusive and relevant to [subject if possible].”
- *Create Lesson Outline:* “Outline a [duration]-minute lesson on [topic]. Include introduction, 2-3 main activities, and a conclusion. Target it to [course level] students.”
- *Active Learning Idea:* “Suggest an interactive exercise to teach [concept]. It should involve student discussion or problem-solving, not just lecture. Briefly explain how to run it.”
- *Draft Assessment Questions:* “Write [number] questions on [topic] that test [whatever level: understanding/apply/evaluate]. Provide answers. [Specify format: multiple choice, short answer, etc., if needed].”
- *Explain Like I'm 18 (ELI18):* “Explain [complex concept] in simple terms appropriate for a first-year college student, using an example or analogy.”
- *Rubric Generator:* “Create a rubric for a [assignment type] on [topic]. Include 3-4 criteria (e.g., content accuracy, organization, etc.) with descriptions for Excellent, Satisfactory, Needs Improvement levels for each.”
- *Study Quiz (for students to use):* “You are a tutor. Quiz me on [topic] with one question at a time. After I answer, tell me if I'm correct and provide a brief explanation or the correct answer.” (Students can feed this to an AI to simulate flashcards.)
- *Feedback Draft:* “Help me draft feedback for a student's work. The work was good at: [list positives]. It needs improvement in: [list areas]. Suggest 2-3 sentences I can send to encourage the student and point out these areas.”
- *Brainstorm Project Ideas:* “List 3 possible project ideas for a [course subject] class that involve [key themes or tools]. Each idea should be described in 2-3 sentences.”
- *Role-Play Setup:* “Provide a role-play scenario about [situation] with roles for [number] participants. Include background and objective for each role.”
- *Summarize Discussion:* “Summarize the key points of debate on [issue] between [Role A] and [Role B]. Make it about one paragraph, listing each side's main argument.”
- *(Add your own as you develop them...)*

Feel free to refine these prompts or chain them (use outputs from one as inputs to another) for more complex needs. Always remember to verify AI outputs.

Index by Course Goal. Below we index some of the cookbook elements by typical instructional goals, so you can find relevant ideas quickly:

- *Engage students on Day 1:* See **Icebreaker Questions & Activities** (Chapter 3) for AI-generated icebreaker ideas.
- *Clarify learning outcomes:* See **Menu Planning** (Chapter 2) – writing SLOs with AI.
- *Increase participation & inclusion:* See **Active Learning & Small Group** (Chapter 4) for prompts to generate inclusive activities (like think-pair-share variations).
- *Assess understanding formatively:* See **Instructional Aids** (Chapter 6) – practice question generation.
- *Promote self-directed learning:* See **Student Study Aids** (Chapter 6) – using AI for self-quizzing
- *Provide feedback faster:* See **Delivering Feedback** (Chapter 6) – feedback comment templates and tone adjustments.
- *Authentic assessment design:* See **Main Dishes** (Chapter 5) and **Elevated Recipes** for project ideas that integrate AI (like AI Literacy assignment, AI debate).
- *Research skill development:* See **AI and Research** (Additional Chapters) for guidelines on using AI in student research projects (literature reviews, data analysis).
- *Ethics & AI discussion:* See **Ethics & Academic Integrity** (Chapter 0) and **Elevated AI Literacy Recipe** for content on responsible AI use, which can be woven into class contracts or activities.

Index by Tool/Technique. Here, we list some common AI tools or techniques mentioned and where in the cookbook they appear:

- *ChatGPT / Bing Chat (LLM text generators):* Used extensively for generating text – e.g., lesson outlines (Chapter 4), feedback (Chapter 6), role-play dialogues (Chapter 6), Q&A tutoring (Chapter 6). Also central in AI Literacy and debate recipes.
- *DALL·E / Bing Image Creator (image generators):* Title page gator image was AI-generated; Introductory Discussion elevated recipe uses image generation as an option. Could also be used in creative extensions (Chapter 7).
- *Microsoft Copilot / NaviGator (integrated educational AI):* Mentioned in UF context for data privacy (Chapter 1) and used by students for Intro Discussion.
- *AI detection tools:* Discussed in Chapter 8 (Cleanup) in the context of academic integrity – caution on reliability. (Use sparingly and with human judgment.)
- *NLP for qualitative analysis:* Hinted in the Research chapter – using AI to code text or find themes.
- *Language translation AI:* Could be used in study aids (e.g., practicing language conversation, as per Student Study Aids with language learning prompt).
- *Speech-to-text or vice versa AI:* Not explicitly covered, but tools like Whisper or text-to-speech can help students with accessibility (tie to UDL in Active Learning).
- *Custom AI model (trained on class data):* Future-forward idea – not explicitly in text, but you could train a small chatbot on your syllabus/FAQs to answer student questions (just ensure accuracy). If interested, see the Research chapter for data considerations.

This prompt library and index should help you quickly jump to the parts of the cookbook most relevant to your immediate needs. Remember that the field of AI in education is evolving – new tools will emerge, and best practices will be refined over time. Keep adding to your own prompt library as you discover what works best for your courses. We hope this structured guidebook serves as a solid foundation for your journey into AI-augmented teaching. Happy prompting and may your “teaching kitchen” be ever inventive and rewarding!

Sources

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Appendix A: Prompt Library by Outcome or Task

Organized by instructional goal, this library provides plug-and-play prompts for use in LLMs (like ChatGPT, Claude, or Gemini) to support teaching, course design, and student learning. Prompts are editable and expandable.

Course & Assignment Design

Goal	Prompt
Generate course goals aligned to program outcomes	<i>I am designing a [student level] course on [topic]. Based on these program outcomes: [insert], write 5–7 course-level goals.</i>
Write student learning objectives using Bloom's Taxonomy	<i>Write 2 learning objectives per module title: [insert]. Use [Bloom's level] verbs and show alignment to this course goal: [insert].</i>
Design a performance-based assessment	<i>Design an authentic assessment for a [student level] [subject] course. Include a scenario, deliverable, and reflection prompt.</i>
Draft rubric criteria	<i>I am grading a [type of assignment]. Create a 3-level rubric (Excellent, Satisfactory, Needs Improvement) with 3–4 clear criteria.</i>

Facilitation, Engagement & Inclusion

Goal	Prompt
Icebreaker activities	<i>Suggest 3 creative and inclusive icebreakers for a [modality] [subject] course of [class size] students.</i>
Generate discussion prompts	<i>Create 3 layered discussion prompts on [topic]: one factual, one personal, and one connection to current events.</i>
Socratic seminar guide	<i>Generate 3 opening and 3 deepening questions for a seminar on [topic], plus 2 role cards and 1 closing reflection question.</i>

Goal	Prompt
Inclusive polling and engagement	<i>Create one multiple choice, one open-ended, and one opinion-based live poll question on [topic].</i>

Student Support & Study Tools

Goal	Prompt
Summarize a reading at multiple levels	<i>Summarize this [reading/passage] in three ways: 1) 8th-grade level, 2) bullet points, 3) glossary of key terms.</i>
Self-quizzing with AI	<i>You are a tutor. Quiz me on [topic], one question at a time. After I respond, provide feedback, correct answers, and an explanation.</i>
Create a guided notes handout	<i>Design a fill-in-the-blank notes sheet on [topic], including 3 review questions and a key vocabulary list.</i>
Provide revision suggestions	<i>Revise the following paragraph for clarity and tone. Then provide 1 suggestion to improve the argument.</i>

Appendix B: Sample AI Syllabus Language

Use or adapt the following policy language for your course syllabi, LMS landing pages, or course contracts. These templates align with KU's Acceptable Use Policy and current best practices.

AI Use Not Permitted

AI tools such as ChatGPT or Claude may not be used in this course unless explicitly instructed otherwise. All submitted work must be entirely your own. Use of generative AI to create, revise, or suggest content for assignments will be considered academic misconduct unless approved in writing.

AI Use Permitted With Disclosure

You may use AI tools in this course to assist with brainstorming, outlining, revising, or generating supplemental ideas. All AI use must be disclosed in your assignment (e.g., “Portions of this assignment were generated using ChatGPT with the following prompt:...”). You are responsible for the accuracy, integrity, and ethics of all submitted content.

AI Use Encouraged for Learning

In this course, AI tools can serve as personal learning aids to help you explore course content, practice skills, or generate ideas. You are encouraged to experiment, iterate, and reflect—but be sure to attribute all AI contributions clearly, and use your own voice and judgment in the final product.



Appendix C: Backward Design Planning Template

This flexible table format helps instructors align learning outcomes, assessments, and activities—with optional AI-enhanced supports.

Stage	Planning Focus	AI Support Prompt Example
Stage 1: Desired Results	What should students understand and be able to do?	<i>Generate 3 course goals and 2 learning outcomes for a course on [topic] aligned with Bloom's levels.</i>
Stage 2: Evidence & Assessment	How will students demonstrate understanding?	<i>Design an authentic assessment for [topic] that includes a real-world task, deliverable, and rubric criteria.</i>
Stage 3: Learning Plan	What learning experiences will help students succeed?	<i>Create a 3-part lesson outline with intro activity, content application, and student self-check for [topic].</i>
Reflection & Review	What supports and scaffolds are needed?	<i>Suggest 2 scaffolding activities and one accessibility strategy for a lesson on [topic] for diverse learners.</i>



Appendix D: AI Tool Quick-Reference Matrix

A sortable, easy-to-reference table of popular generative AI tools—matched with teaching tasks, outputs, and ethical considerations.

Tool Name	Type	Best For	Example Use in Teaching	Ethical Notes
ChatGPT (OpenAI)	Text generation (LLM)	Brainstorming, rewriting, tutoring, simulations	Draft discussion questions, simulate historical dialogue, scaffold essay outlines	Disclose usage; check for hallucinated citations; avoid PII input
Claude (Anthropic)	Conversational LLM	Multi-part reflection, long document summarization, policy analysis	Upload long readings and ask for simplified summaries or opposing perspectives	More privacy-forward than some tools; still verify all facts
Microsoft Copilot	Embedded AI in MS 365	Drafting emails, slide outlines, Excel formulas	Generate presentation summaries or create spreadsheet rubrics	FERPA-compliant when using institutional accounts
Bing Chat (via Edge)	Web-connected LLM	Up-to-date sources, citations, and charts	Ask for recent examples, news comparisons, or generate current event debates	Offers links to sources but may include ads or sponsored results

Tool Name	Type	Best For	Example Use in Teaching	Ethical Notes
Google Gemini	Google's AI suite	Visuals, multi-modal inputs, classroom image prompts	Ask to convert slides into speaking notes or generate charts for lecture	Terms still evolving; avoid confidential data input
Canva Magic Write / Design AI	Visual + text	Infographics, portfolios, flyers	Students create visual explainers using AI-written text blocks and design templates	Always verify copyright and sources for generated visuals
DALL·E / Bing Image Creator	AI-generated imagery	Illustrations, visual metaphors, creative synthesis	Create an image of a robot professor cooking up ideas in a classroom kitchen	Not licensed for academic reuse by default—use for drafts, not publications
Otter.ai / Descript	Audio & transcription	Captions, podcast editing, auto summaries	Generate transcripts of student podcasts or oral presentations	Students should approve transcripts before submission
Perplexity AI	Research assistant	Source summaries, citation support	Find 3 scholarly articles on trauma-informed pedagogy and summarize each	Better for citations than ChatGPT, but verify database access
Google Notebook LM	Teaching/Study Assistant	Note, quizzes, podcasts, visual presentations, flashcards, mind maps	Generate a podcast based on the uploaded reading materials	Review the content to ensure accuracy

PROMPT TO PLATE



Step into the kitchen of innovation with The AI Faculty Cookbook—a collection of creative “recipes” designed to spark new possibilities for teaching and learning with generative AI. From pedagogical pairings to prompt-driven experiments, each contribution offers practical strategies and fresh perspectives for weaving AI into instruction. Whether you’re looking to enhance classroom engagement, reimagine assignments, or simply sample what’s possible, this cookbook serves up adaptable ideas to help faculty design, teach, and inspire with confidence in the age of AI.
