

# Rethinking Assignments: Using AI to Reverse Engineer the Process

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This handout is designed to help you rethink one of your own assignments in light of AI. You'll use prompting as a tool to uncover learning objectives, analyze risks, explore enhancements, and redesign with process and guidance in mind.

## Learning Objectives:

1. **Identify** the learning objectives of an existing assignment using structured AI prompts.
2. **Analyze** how AI may hinder or support those objectives, and plan strategies to guide student learning.
3. **Revise** the assignment to emphasize process, engagement, and appropriate AI integration.

## Roadmap

We'll move through three steps—identify objectives, analyze risks/benefits, and revise the assignment.

## What you need

1. Access to a Generative AI tool: [Which AI to Use](#)
2. An electronic **copy of one of your assignments, projects, etc.** (PDF, Word, etc.) to upload or copy-paste from.

## Carrying It Forward

Once you've tried this with one assignment, you can repeat the process across your course. The goal isn't to rewrite everything overnight, but to develop a habit of checking: "What are my learning goals, how might AI help or hinder, and what guidance do my students need?"

### 1. What are my learning objectives?

As we've already noted, we should always start with our learning objectives. But if you are like me, you may not have your learning objective explicitly stated. Let's return to the assignment you've been improving.


#### PROMPT:

**[upload your assignment/project file using the ⊕-button]**

I want you to act like a pedagogical expert in [*discipline area*] for my [*course*] geared for [*student level, e.g., college-level sophomores*]. Look at the attached assignment and give me the learning objectives in [*format - a bulleted list with heading and details*] in a [*style - friendly tone that my students will understand*].

Notice: We are starting to be more intentional with prompting: **Role, Task, Format, and Style.**

[Link to example from Calculus](#)


 *Room for Notes*

## 2. How might AI undercut the goals of this assignment?

Now that you've reflected on the goals of your assignment, let's look at where things might go off the rails. If students use AI carelessly—or strategically—it may short-circuit the deeper thinking or skill-building you want to cultivate. This question helps you identify those weak points so you can adjust the assignment or your guidance accordingly.

### **PROMPT:**

How might AI undercut the goals of this assignment? What would a student miss out on by leaning too heavily on AI? What strategies might you use to minimize this risk?

 *Room for Notes*

### 3. How might AI enhance the assignment?

Let's flip the perspective. Generative AI can sometimes deepen learning, scaffold complex tasks, or give students more confidence to try. But this only happens if we're intentional about when and how they use it—and if we coach them along the way.

#### **PROMPT:**

How might AI enhance the assignment or support student learning? Where might students benefit from guidance on how to use it productively, ethically, or creatively?

#### **FOLLOW-UP PROMPT:**

Based on the suggestions you just gave about how AI could enhance this assignment, generate 4–6 example prompts that a student could use to engage with AI productively, ethically, or creatively while completing the task. These should be written in the student's voice and aimed at supporting—not replacing—the learning goals of the assignment.

NOTICE - before moving to the follow-up prompt, we took ChatGPT's suggestion of creating an "AI guidance box." This is often the case with the 5.0 model, it will complete your prompt, then suggest how to take things further.

 *Room for Notes*

#### 4. Focus on the Process

Even well-designed assignments can unintentionally signal that the final product matters more than the learning that leads to it. Let's pause to consider where students may struggle, disengage, or miss the deeper value of the work. With the rise of generative AI, students may feel even more pressure to "just get it done." This is a chance to refocus on the process and how you might support or elevate it—through guidance, check-ins, reframing, or AI-supported scaffolding.

#### **PROMPT:**

What parts of the assignment process matter most for student growth or engagement? How could you make that part more visible, more meaningful, or better supported? Could AI play a role in helping students reflect, plan, revise, or build confidence throughout the process?

 *Room for Notes*