Prompt Engineering for College Faculty

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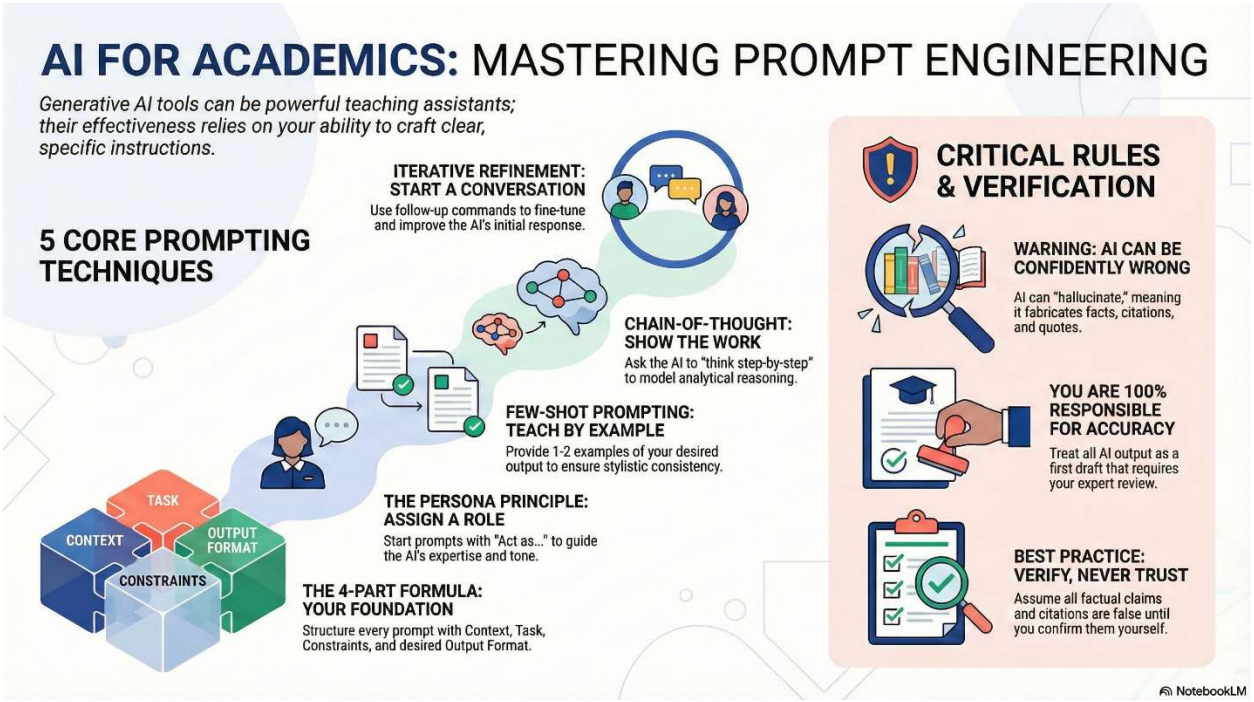
Generative AI tools like ChatGPT, Claude, and similar platforms can serve as valuable teaching assistants when given clear, well-structured instructions. This guide provides practical techniques for faculty in the social sciences and humanities to use AI effectively for course development, content creation, and assessment design.



What is Prompt Engineering?

Prompt engineering is the practice of writing clear, specific instructions that guide AI to generate high-quality, relevant responses. The quality of AI output depends directly on the quality of your prompt. Think of it as giving precise directions: vague instructions produce vague results, while detailed directions lead to exactly what you need.

1. The Four-Part Prompt Formula

The most reliable way to construct effective prompts is to include four key components:

Component	Description
Context	Provide background information: audience, course level, and purpose
Task	Clearly state what you want the AI to do (create, analyze, summarize, etc.)
Constraints	Specify limits: length, difficulty level, tone, concepts to include or avoid
Output Format	Indicate how the response should be organized (list, table, paragraphs, etc.)

Example: Creating a Quiz for Sociology

Basic Prompt:

> *Create a quiz about social inequality.*

Enhanced Prompt Using the Formula:

> *[Context] I teach an introductory Sociology course on social stratification to second-year undergraduates.*
> *[Task] Create a five-question multiple-choice quiz testing students' understanding of Max Weber's concepts of class, status, and power.*

> *[Constraints] Questions should be appropriate for students with basic sociological knowledge. Avoid advanced jargon. Focus on application-level questions per Bloom's Taxonomy.*
> *[Output Format] Present each question as a numbered item with four answer options (A-D). Indicate the correct answer below each question.*

2. The Persona Principle

Assigning the AI a specific role or persona dramatically improves response quality. By telling the AI to 'act as' a particular expert, you guide it to adopt appropriate expertise, tone, and perspective. This transforms generic outputs into focused, disciplinary responses.

How to Use It:

Begin your prompt with phrases like 'Act as...' or 'You are a...' followed by a specific role relevant to your discipline.

Example: Literary Analysis

> *Act as a literary critic specializing in post-colonial theory. Provide a critique of Chinua Achebe's 'Things Fall Apart,' analyzing how Okonkwo's character represents the cultural clash and tragic consequences of colonialism. Your critique should be approximately 300 words and suitable for undergraduate discussion.*

Example: Historical Analysis

> *Act as a peer reviewer for an academic journal in American History. Review Frederick Douglass's 'Narrative' with attention to its rhetorical strategies and audience awareness. Provide constructive critique appropriate for upper-division undergraduate discussion.*

3. Few-Shot Prompting: Teaching by Example

Few-shot prompting means providing examples of the output you want. These examples serve as models that guide tone, complexity, and structure—especially useful for maintaining consistency across materials.

When to Use It:

- Creating discussion questions with a specific style
- Generating assessments that match your pedagogical approach
- Producing content that requires a particular academic tone

Example: Philosophy Discussion Questions

Without Examples (Zero-Shot):

> *Generate discussion questions about Plato's Allegory of the Cave.*

With Examples (Few-Shot):

> *Generate discussion questions for an undergraduate ethics seminar. Use these examples as models:*
>
> > *Example 1: How does Aristotle's concept of virtue challenge modern ideas of moral rules?*
> > *Example 2: In what ways does utilitarianism conflict with our intuitions about individual rights?*
>
> *Now create three discussion questions about Plato's Allegory of the Cave in the same style.*

4. Chain-of-Thought Prompting: Show the Work

Chain-of-thought prompting asks AI to break down reasoning step-by-step rather than jumping to conclusions. This approach mirrors how faculty model analytical thinking for students and is particularly valuable in social sciences where process matters as much as product.

How to Use It:

Include phrases like 'show your reasoning,' 'think step-by-step,' 'walk through the following steps,' or explicitly outline the steps you want the AI to follow.

Example: Psychology Case Study Analysis

> *Act as a clinical psychologist. Analyze this case study step-by-step:*
> *A 35-year-old woman reports persistent anxiety, social avoidance, and flashbacks following a car accident two years ago. She experiences heightened startle responses and insomnia.*
> *Step 1: Identify potential symptoms and match them to DSM-5 criteria.*
> *Step 2: Consider possible diagnoses, explaining why each fits or doesn't.*
> *Step 3: Suggest evidence-based treatment options with rationale.*
> *Step 4: Conclude with a summary diagnosis and plan.*

5. Iterative Refinement: The Conversation Approach

Think of AI interaction as a dialogue, not a one-shot command. Start with a broad prompt, then use follow-up questions to refine, clarify, and improve the output. This iterative approach mirrors the Socratic method and allows you to guide the AI toward your exact needs.

Example Dialogue: Simplifying Complex Theory

Initial Prompt:

> *Explain Foucault's concept of power-knowledge.*

AI Response:

[Provides detailed, graduate-level explanation with complex terminology]

Refinement Prompt 1:

> *That's too advanced for first-year students. Simplify it using a social media example they can relate to. Limit to 200 words and avoid terms like 'discourse' unless explained simply.*

AI Response:

[Provides simplified explanation with relatable analogy]

Refinement Prompt 2:

> *Great! Now add two discussion questions at the end to engage students.*

6. Practical Applications by Task Type

Creating Course Materials

Syllabus Development:

> *You are an experienced history professor. Create a week-by-week syllabus for a 15-week undergraduate course on the Civil Rights Movement. For each week, include: (1) a topic focus, (2) 2-3 key readings, (3) one primary source, and (4) a discussion question. Present as a table.*

Lecture Content:

> *Act as an anthropology professor. Write a 20-minute lecture script on symbolic interactionism for first-year students. Use everyday examples they can relate to. Include three points where I should pause for questions. Use a conversational tone.*

Creating Assessments

Essay Prompts:

> *Create three essay prompts for a Political Science course on American democracy. Each prompt should require students to analyze (not just describe) a contemporary political issue using course concepts. Prompts should be appropriate for a 5-7 page paper. Include grading criteria for each.*

Case Study Scenarios:

> *I teach a course on research ethics. Create two realistic case study scenarios where students must identify ethical violations and propose solutions. Each scenario should be 150-200 words and include ambiguous elements that encourage debate. Focus on social science research contexts.*

Adapting Existing Content

AI can help modify materials for different audiences or purposes:

- **Simplify:** "Simplify this explanation of Marxist theory for community college students."
- **Expand:** "Expand this summary of Durkheim's work with two concrete examples."
- **Reframe:** "Rewrite this formal academic explanation in a more conversational tone."
- **Restructure:** "Convert this lecture outline into a script for a 15-minute video."

7. Critical Limitations and Verification Requirements

AI systems can generate confident but incorrect information—a phenomenon called *hallucination*. You are 100% responsible for the accuracy of any AI-generated content you use.

Common Issues:

- **Fabricated citations:** Citations may be completely invented
- **Misattributed quotes:** Quotes may be assigned to wrong authors
- **Outdated information:** AI training data has a knowledge cutoff date
- **Bias amplification:** AI can reflect and amplify societal biases from training data
- **Inconsistency:** Same question can produce different answers

Required Verification Steps:

1. **Treat all AI output as a first draft requiring review**
2. **Verify all factual claims using reliable academic sources**
3. **Assume all citations are false until confirmed**
4. **Apply your disciplinary expertise to evaluate arguments and interpretations**
5. **Model verification practices for students when using AI in teaching**

8. Quick Reference Guide

Technique	When to Use
Four-Part Formula	Use for every prompt as your baseline structure
Persona	Use when you need specialized expertise or a particular analytical perspective
Few-Shot	Use when you need consistent style, tone, or format across materials

Chain-of-Thought	Use for complex analysis, case studies, or when process is as important as product
Iterative Refinement	Use when first output is close but needs adjustment—don't start over, refine

Best Practices:

- Start simple, then add complexity as needed
- Save effective prompts for reuse and adaptation
- Combine techniques for complex tasks
- Be specific—vague instructions produce vague results
- Remember: AI assists, you decide

Conclusion

Used thoughtfully, AI can reduce routine workload and free faculty time for what matters most: mentoring, critical inquiry, and human connection. Prompt engineering is not about control—it's about clarity. The techniques in this guide provide a foundation, but your pedagogical expertise and judgment remain essential to creating effective learning experiences.

Experiment freely, iterate often, and always verify. Your creativity as an educator combined with AI's capabilities creates powerful possibilities for teaching and learning.