

# Generative AI for Professionals

## Detailed Lesson Plans & Hands-On Labs (6 Weeks)

**Audience:** Mid-career professionals

**Format:** 1.5 hours/week (90 minutes)

**Philosophy:** Minimal theory, maximum application, real workplace relevance

**Tools Used Throughout:** ChatGPT, Claude (Anthropic), Gemini

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## WEEK 1 – Foundations of Generative AI (Confidence + Grounding)

### Learning Objectives

By the end of this session, students will: - Understand what generative AI is and is not - Develop a mental model of how LLMs work - Recognize strengths, limitations, and risks - Successfully access and use all three platforms

### Agenda (90 minutes)

- 1. Welcome & Course Orientation (10 min)**
  2. Course goals and outcomes
  3. What success looks like after 6 weeks
- 4. How Generative AI Works (Conceptual) (25 min)**
  5. What is a Large Language Model?
  6. Tokens, probabilities, training data (high-level)
  7. Why hallucinations happen
  8. Why AI sounds confident even when wrong
- 9. Tool Landscape Overview (15 min)**
  10. ChatGPT: general-purpose, reasoning, workflows
  11. Claude: long documents, careful language, summarization
  12. Gemini: multimodal, Google ecosystem, research
- 13. Live Demo: Same Prompt, Three Tools (15 min)**
  14. Compare tone, depth, structure
  15. Discuss which tool fits which use case

## 16. Hands-On Lab (20 min)

### Hands-On Lab – Week 1

**Lab Goal:** Build comfort using all three tools

**Instructions:** 1. Log into ChatGPT, Claude, and Gemini 2. Copy the same prompt into all three:

"Summarize this article for a busy executive in 5 bullet points. Highlight any risks or uncertainties."

(Instructor provides article or memo) 3. Compare outputs: - Length - Tone - Confidence level - Missing information

**Reflection Questions:** - Which tool felt most trustworthy? - Where did you notice assumptions? - What would you double-check?

**Take-Home:** - One-paragraph reflection: *How could AI help or hurt my work today?*

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## WEEK 2 – Prompting for Quality, Accuracy, and Control

### Learning Objectives

Students will: - Understand prompt structure - Learn iterative prompting - Gain control over outputs - Reduce generic or incorrect responses

### Agenda (90 minutes)

#### 1. Prompting Myths vs Reality (10 min)

#### 2. Prompt Framework (20 min)

3. Role

4. Context

5. Task

6. Constraints

7. Output format

#### 8. Live Prompt Evolution Demo (15 min)

9. Weak prompt → refined prompt

#### 10. Hands-On Lab (35 min)

#### 11. Group Debrief (10 min)

## Hands-On Lab – Week 2

**Lab Goal:** Learn to control AI outputs

**Exercise 1: Fix the Prompt** - Start with:

"Write an email explaining a project delay." - Improve it step-by-step by adding: - Audience - Tone - Constraints - Desired format

**Exercise 2: Structured Output** Prompt:

"Analyze the following situation and return your response as a table with columns: Risk, Impact, Likelihood, Mitigation."  
(Provide scenario)

**Exercise 3: Cross-Tool Comparison** - Run the same refined prompt in ChatGPT, Claude, and Gemini - Note differences

**Take-Home:** - Rewrite one real work task using a structured prompt

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## WEEK 3 – AI for Writing, Communication, and Knowledge Work

### Learning Objectives

Students will: - Draft, edit, and refine professional writing - Control tone and audience - Use AI as a thinking partner

### Agenda (90 minutes)

1. **AI Writing Patterns (15 min)**
2. Drafting vs editing
3. Why first drafts are often mediocre
4. **Tone & Audience Control (15 min)**
5. **Live Demo: Turning Notes into a Memo (10 min)**
6. **Hands-On Lab (40 min)**
7. **Share & Discuss (10 min)**

## Hands-On Lab – Week 3

**Lab Goal:** Improve real workplace communication

**Exercise 1: Rewrite & Improve** - Bring a real (sanitized) email or document - Ask AI to: - Rewrite for clarity - Rewrite for executive audience - Rewrite to be more persuasive

**Exercise 2: Two-Tool Comparison** - Use ChatGPT for drafting - Use Claude for refinement and tone polishing

**Exercise 3: Feedback Loop Prompt:**

"Review this document and suggest improvements for clarity, tone, and structure. Be specific."

**Take-Home:** - Submit before/after version of a document

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## **WEEK 4 – AI for Analysis, Research, and Decision Support**

### **Learning Objectives**

Students will: - Use AI for structured thinking - Perform analysis and research - Validate and challenge outputs

### **Agenda (90 minutes)**

1. **AI as an Analyst, Not an Oracle (10 min)**
2. **Analytical Frameworks with AI (20 min)**
3. SWOT
4. Pros/Cons
5. Scenario analysis
6. **Live Demo: Business Case Analysis (15 min)**
7. **Hands-On Lab (35 min)**
8. **Debrief (10 min)**

### **Hands-On Lab – Week 4**

**Lab Goal:** Practice decision support

**Exercise 1: Scenario Analysis Prompt:**

"You are a senior strategy consultant. Analyze the following decision. Identify options, risks, and tradeoffs."  
(Provide case)

**Exercise 2: Research with Gemini** - Ask Gemini to summarize a market or trend - Identify assumptions or outdated info

**Exercise 3: Validation Prompt:**

"What assumptions are you making? What information would change your recommendation?"

**Take-Home:** - One-page decision brief using AI assistance

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## **WEEK 5 – AI for Workflow, Productivity & Role-Specific Use**

### **Learning Objectives**

Students will: - Integrate AI into daily work - Design personal workflows - Avoid overuse or misuse

### **Agenda (90 minutes)**

1. **From Tool to Habit (10 min)**
2. **AI Workflow Patterns (20 min)**
3. Brainstorm → Draft → Review → Finalize
4. **Role-Based Examples (15 min)**
5. **Hands-On Lab (35 min)**
6. **Share & Discuss (10 min)**

### **Hands-On Lab – Week 5**

**Lab Goal:** Build a personal AI workflow

**Exercise 1: Task Mapping** - Identify a weekly task you dislike or that takes too long - Break it into steps

**Exercise 2: AI Redesign** For each step: - Decide if AI can help - Choose which tool

**Exercise 3: Test Workflow** - Run the workflow end-to-end - Note time saved and quality changes

**Take-Home:** - Document your AI workflow (1 page)

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# WEEK 6 – Capstone & Responsible Use

## Learning Objectives

Students will: - Demonstrate real-world application - Reflect on ethical and professional risks - Build a plan for continued learning

## Agenda (90 minutes)

1. **Capstone Overview (10 min)**
2. **Student Presentations (45 min)**
3. **Responsible Use Discussion (20 min)**
4. **Wrap-Up & Next Steps (15 min)**

## Capstone Project

**Requirements:** - Real workplace use case - Use at least two AI platforms - Show prompt evolution - Explain tool choice - Address accuracy, bias, and privacy

## Responsible Use Checklist

- Is this task appropriate for AI?
- Is sensitive data protected?
- How will outputs be validated?
- Who is accountable?

## Final Take-Home

- Personal AI use policy
- Learning plan for staying current

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## End of Course Materials