APPLIED TECHNOLOGY ACADEMY

800.674.3550
Info@AppliedTechAc.com
AppliedTechnologyAcademy.com

Prompt Engineering Fundamentals

Applied Technology Academy

A practical one-day introduction to working with generative AI, for professionals who want dependable results from it with no background in AI or programming. Participants explore how large language models and AI chatbots actually work, learn to design and refine prompts that produce relevant and consistent results, and practice verifying information, spotting bias and protecting sensitive data. Hands-on activities cover creating text and images, comparing how models behave, and building a reusable assistant they can put to work.

LEVEL	DURATION	COURSE CODE	DELIVERY
Introductory	**1 Day**	**SEN-109**	**Instructor-led**

Course Overview

- One instructor-led day, platform-neutral and built around everyday workplace tasks.
- Explains what happens behind the screen — tokens, context windows, how a model builds a response.
- Prompting then rests on how the tools actually work rather than on habit or guesswork.
- Moves from single prompts to structured prompts to a reusable assistant you build yourself.
- Treats verification, privacy and responsible use as part of the work, not an appendix.

Course Outline

- **Module 1. Understanding your new digital assistant**
  - Generative AI can help with writing, research, analysis, brainstorming and many everyday tasks. To use it well it helps to understand what happens behind the screen. Large language models break prompts and responses into tokens, and token count affects cost, speed and response length. Each model also has a context window that limits how much it can consider at once. The module covers how models learn and generate, how they handle text and images, where they fall short, and why human judgment still matters.
- **Module 2. Designing effective prompts**
  - Results depend heavily on the instructions and information the model receives. A strong prompt states the goal, supplies useful context and describes what a good response looks like. Examples can be typed in or uploaded as documents and images, and several examples can demonstrate a pattern through few-shot prompting. AI can help draft and improve a prompt; testing and adjusting is what makes the result usable.
- **Module 3. Choosing your AI assistant**
  - Assistants differ in what they can do. Some work across text, images, audio and files; others connect to workplace applications or specialize in particular tasks. Models, features, usage limits, privacy controls and pricing all vary. Comparing them makes it easier to pick an assistant that fits

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the task, the information involved and the organization's requirements. Also covers response settings for quality, speed and detail, when an organization-approved assistant is required, and the environmental cost of training and running these systems.

- **Module 4. Structuring prompts for reliable results**
  - When a request carries several instructions, structure tells the model what belongs together and what matters most. Organize prompts with headings, lists, delimiters, Markdown and XML-style tags; set constraints, define an output format, give examples and break complex tasks into steps. The result is less confusion, more consistency and less time spent revising. A short look at self-attention explains how a model relates words and ideas across a prompt, and AI-assisted critique is used to diagnose and improve an existing prompt.
- **Module 5. Think before you trust AI**
  - AI can answer confidently and still be incomplete, outdated, biased or wrong. Learn why that happens and how to catch it before you use or share the content: checking claims, verifying sources, looking for bias and protecting sensitive information — and knowing when to rely on your own expertise, ask someone else, or follow your organization's AI policy. Covers which prompt, context and model factors push output towards being misleading, and a repeatable review process for verifying, revising and approving AI-assisted content.
- **Module 6. Protecting people and data**
  - Using AI responsibly means weighing its effect on people, information and decisions. Work through fairness, privacy, security, transparency and accountability: how to handle different kinds of data, who is responsible for decisions involving AI, and how to judge ethical and legal risk — then choose safeguards that hold from tool selection through ongoing review. Includes what the EU AI Act is for and when its requirements may reach a use case, alongside relevant data protection law, industry rules and organizational policy.
- **Module 7. Building your own AI assistant**
  - Design and configure an assistant for specific business tasks and workflows without writing code. Compare how ChatGPT, Gemini, Claude and Microsoft Copilot approach reusable capability through Skills, Plugins, Projects and Agents. Pick a suitable use case, then define clear instructions, responsibilities and boundaries, and choose knowledge sources - including how their access permissions affect information security. Finish by testing and refining the assistant's responses for accuracy and consistency, and applying human oversight, organizational policy and access controls before sharing it.

Prerequisites

- No previous experience with artificial intelligence, programming or prompt engineering is required.
- Basic computer and internet skills.
- Experience using common workplace applications.
- Access to an AI chatbot such as ChatGPT, Google Gemini or Microsoft Copilot.

Follow-On Courses

- Practical AI for Business
- AI at Work: Safe, Secure & Compliant
- Introduction to Agentic AI

Who Should Attend

- Professionals who want to use generative AI more effectively in their daily work.
- Employees, managers, educators, content creators, analysts, marketers and project teams.
- Anyone improving productivity, communication, research or problem-solving with AI.
- Teams asked to adopt AI who need to judge its output rather than accept it.

What You'll Learn

By the end of this course, participants will be able to:

- explain how generative AI and large language models produce responses
- compare common AI chatbots and select an appropriate tool for a defined task
- construct effective prompts using clear objectives, relevant context, constraints, examples and output requirements
- apply structured prompting techniques to improve the relevance, consistency and usability of AI-generated results
- evaluate AI output for accuracy, bias, misinformation and potential risk
- apply privacy, security and responsible AI practices when using AI in the workplace
- create, test and safely share a custom AI assistant for a practical business use case

Hands-On Work

Eight guided activities run through the day, one of them optional:

- Explore what AI chat applications can do
- Building better AI prompts
- Creating images with AI
- Structuring prompts
- Context, ambiguity and AI interpretation (optional)
- Prompt guardrails
- Analyze customer feedback with generative AI
- Create your own reporting Skill and Plugin (ChatGPT)

Ready to enroll? Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.