



## Prompt Engineering and Microsoft Copilot Agents

- 3 Days
- Lecture and Hands-on Labs

### Course Overview

“Prompt Engineering and Microsoft Copilot Agents” is an intensive three-day course designed to transform participants from passive chatbot users into architects of automated business solutions. The curriculum begins with two days of rigorous Prompt Engineering, treating it as a technical discipline required to direct Large Language Models (LLMs) with precision. Students master advanced frameworks like Chain-of-Thought reasoning and persona-based constraints to construct robust “reasoning engines.” Through hands-on labs, participants learn to force AI to perform complex analytical tasks—such as parsing unstructured shipping manifests and identifying regulatory discrepancies—while strictly minimizing hallucinations.

The final day pivots to direct application within the Microsoft ecosystem, focusing on Microsoft Copilot and Copilot Studio. This segment demystifies the “End-to-End Workflow,” demonstrating how to evolve static administrative tasks into dynamic, automated processes. Students will build custom AI Agents grounded in secure internal data, navigating the critical security boundaries of the Microsoft 365 tenant. By connecting these agents to trusted knowledge sources like SharePoint and integrating them into Microsoft Teams, attendees will leave with deployed, functional tools capable of addressing real-world logistics challenges—driving immediate, measurable productivity gains.

Review this course online at <https://www.alta3.com/courses/ai-micro-copilot>

### Who Should Attend

- Software Developers
- IT Professionals
- Managers

### What You’ll Learn

- Master Precision Prompting
- Analyze Data with AI
- Navigate the Copilot Ecosystem
- Build & Deploy Custom Agents
- Implement Security Best Practices

### Outline

#### Day 1: The Art of Instruction

- 🗣️ Lecture: Large Language Models
- 🖥️ Lecture + Lab: Getting Started with the Lab Environment
- 🗣️ Lecture: Writing Prompts for LLMs
- 🖥️ Lecture + Lab: Define Prompt Parameters: Task/Inputs/Outputs/Constraints/Style
- 🖥️ Lecture + Lab: Prompt Techniques: Chaining, Set Role, Feedback, Examples
- 🗣️ Lecture: Zero-shot and Few-shot Prompting

- 🖥️ Lecture + Lab: Implementing Zero-shot and Few-shot Techniques
- 🗣️ Lecture: Chain-of-Thought (CoT) Prompting
- 🖥️ Lecture + Lab: Self-Generated Chain of Thought (COT)

#### Day 2: Data Reasoning & Analysis

- 🗣️ Lecture: Data Analytics with AI
- 🗣️ Lecture: Prompting with File Inputs
- 🖥️ Lecture + Lab: Text Input Files: Extraction and Summarization
- 🖥️ Lecture + Lab: Spreadsheet Input Files: Analysis and Filtering
- 🗣️ Lecture: Using Prompts for Data Cleaning
- 🖥️ Lecture + Lab: Data Cleaning and Preparation
- 🗣️ Lecture: ReAct Prompting: Reasoning and Action
- 🖥️ Lecture + Lab: Interactive Decision Making with ReAct
- 🖥️ Lecture + Lab: Producing Formatted Outputs (JSON/CSV/Markdown)
- 🏆 Challenge: Data Analytics Challenge: The Disaster Shipment

#### Day 3: Building Agents in Microsoft Copilot

- 🗣️ Lecture: The Copilot Ecosystem: M365 vs Studio
- 🖥️ Lecture + Lab: Accessing the Agent Builder
- 🖥️ Lecture + Lab: Building Your First Declarative Agent
- 🖥️ Lecture + Lab: Configuring Knowledge: File Uploads vs SharePoint
- 🖥️ Lecture + Lab: System Prompt Engineering: Applying Persona and Constraints
- 🗣️ Lecture: Beyond Chat: Introduction to Topics and Triggers
- 🖥️ Lecture + Lab: Advanced Configuration: Defining Specific Conversation Topics
- 🖥️ Lecture + Lab: Orchestrating Output: Drafting Content for Outlook/Word
- 🖥️ Lecture + Lab: Publishing and Deployment Channels
- 🖥️ Lecture + Lab: Troubleshooting: Authentication and Permissions in Teams
- 🏆 Challenge: Capstone: Build the “Morning Ops” Agent

#### Prerequisites

- Must have access to Microsoft Copilot

#### Next Courses