

## Copilot App using Azure AI Studio

**Course Objective:** To leverage Azure OpenAI's capabilities for language coding, image generation, and responsible AI practices. Through hands-on labs, the course covers Azure OpenAI Studio Playground, Web Chat Copilot App development using Azure AI Studio, Assistant API and Semantic Kernel, an open-source SDK to create copilot apps using LLMs.

**Exam:** No

**Course Vendor:** Microsoft (Unofficial)

**Lab/Exercise:** Yes

**Note:** To complete the hands-on labs in this course, students require an Azure subscription that has been approved for access to the Azure OpenAI service.

Azure OpenAI: <https://learn.microsoft.com/legal/cognitive-services/openai/limited-access>

### Pre-requisites:

- Familiarity with Azure portal.
- Experience programming with C# or Python.
- Python basics: <https://learn.microsoft.com/en-us/training/paths/beginner-python/>
- C# basics: <https://learn.microsoft.com/en-us/training/paths/get-started-c-sharp-part-1/>

### Why Enroll?

- Hands-On Learning: Dive deep into practical, real-world projects.
- Expert Guidance: Learn from industry experts and seasoned developers.

- Cutting-Edge Technology: Get up to speed with the latest in AI and machine learning using Azure AI Studio.
- Community Support: Join a vibrant community of like-minded professionals.

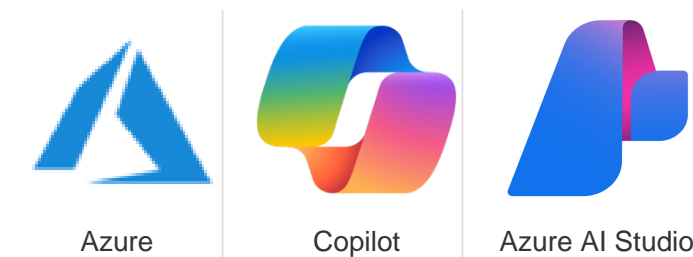
### What You'll Learn:

- Azure AI Studio: Master the tools and features of Azure AI Studio to create and deploy AI solutions efficiently.
- Semantic Kernel: Understand and implement semantic algorithms for intelligent and context-aware applications.
- Copilot App Development: Gain the skills to build, train, and deploy your own Copilot apps that can assist and automate tasks.

### Who Should Enroll?

- Developers eager to integrate AI into their applications.
- AI enthusiasts looking to expand their toolkit with Azure's powerful features.
- IT professionals aiming to stay ahead in the rapidly evolving tech landscape.
- Anyone passionate about AI and its transformative potential.

## Tech Stack To Be Covered



### Module 01: Building NLP solutions using Azure AI Studio

- Azure OpenAI's base model and its deployment
- **Lab:** Generate text with Azure OpenAI Service (SDK)

- **Lab:** Generate code with Azure OpenAI Service (SDK)

## Module 02: Chat Copilot using Azure AI Studio

- Overview of Azure AI Studio
- Workflow for Building Chat Copilot using Azure AI Studio
- Azure OpenAI with Assistants API
- **Lab:** Build your own Chat Copilot using your own data (Azure AI Studio)
- **Lab:** Build your own Chat Copilot using your own data (Assistants API)

## Module 03: Introduction to Prompt Flow Design

- Prompt flow Overview
- Develop Prompt flows
- Evaluate Prompt flows
- **Lab:** Prompt flow design using templates (Standard flow, Chat flow & Evaluation flow)

## Module 04: Create AI Agents & AI memories using Semantic Kernel

- Initialize the kernel
- Give your agent skills with plugin
- Improve automation with planners
- Understanding embeddings
- Store context in vector databases
- Responsible AI using Semantic Kernel
- The Schillace Law's
- **Hands-on/Lab:** Create AI Agents using Semantic Kernel

## Module 05: Hands-on Implementation using Semantic Kernel SDK

- **Lab:** Basic Labs on Semantic Functions
- **Lab:** Adding plugins to Semantic Kernel
- **Lab:** Adding memories to Semantic Kernel
- **Lab:** Using connectors in Semantic Kernel

- **Lab:** Chaining concept in Semantic Kernel
- **Lab:** Integrating Bing with Azure OpenAI using Semantic Kernel

#### **Module 06: Demo Project on Semantic Kernel in a box**

- Solution Architecture of semantic kernel in a box
- Demo working project on semantic kernel in a box