KOENIG step forward

Microsoft Solutions Partner
Microsoft Cloud Training Services

KOENIG SOLUTIONS · COURSE OUTLINE

# Build a Copilot App Using Azure AI Studio and Semantic Kernel

Learn to build copilot apps with Azure AI Studio and Semantic Kernel, from prompt flows to AI agents and memories.

| 2 Days | 5 | 16 | 13 |
|---|---|---|---|
| DURATION | MODULES | TOPICS | HANDS-ON ACTIVITIES |

## COURSE OVERVIEW

This course covers building NLP solutions with Azure OpenAI's base models and deployment, then moves to constructing chat copilots using Azure AI Studio and the Assistants API. It introduces prompt flow design, including developing and evaluating standard, chat and evaluation flows. It then covers creating AI agents and AI memories with Semantic Kernel, covering plugins, planners, embeddings, vector databases and responsible AI, followed by hands-on implementation with the Semantic Kernel SDK and a demo project on semantic kernel in a box.

## WHO THIS COURSE IS FOR

- **AI Developers**
- **Software Engineers**
- **Solution Architects**
- **Prompt Engineers**
- **Machine Learning Engineers**

## PREREQUISITES

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/

## LEARNING OBJECTIVES

- Deploy Azure OpenAI base models for text, code and image generation
- Build chat copilots using Azure AI Studio and the Assistants API
- Explain the workflow for developing prompt flows
- Develop and evaluate standard, chat and evaluation prompt flows
- Configure AI agents with plugins, planners and embeddings
- Store context using vector databases within Semantic Kernel
- Apply responsible AI principles using Semantic Kernel
- Implement plugins, memories and connectors with Semantic Kernel SDK

COURSE SYLLABUS

# 5 Modules, 16 Topics

01

3 Labs

## Building NLP Solutions Using Azure AI Studio

TOPICS

Azure OpenAI's base model and its deployment

02

2 Labs

## Chat Copilot Using Azure AI Studio

TOPICS

- Overview of Azure AI Studio
- Workflow for Building Chat Copilot using Azure AI Studio
- Azure OpenAI with Assistants API

03

Lab

## Introduction to Prompt Flow Design

TOPICS

Prompt flow Overview · Develop Prompt flows · Evaluate Prompt flows

04

Hands-on/Lab

## Create AI Agents & AI Memories Using Semantic Kernel

TOPICS

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 Implementation Using Semantic Kernel SDK

6 Labs

06

## Demo Project on Semantic Kernel in a Box

TOPICS

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

NOTES

- 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

HANDS-ON ACTIVITIES

# Practise What You Learn

| # | MODULE | ACTIVITY |
|---|---|---|
| 01 | **Building NLP Solutions Using Azure AI Studio** | LAB<br>■ Generate text with Azure OpenAI Service (SDK)<br>■ Generate code with Azure OpenAI Service (SDK)<br>■ Generate image with Azure OpenAI Service (SDK) |
| 02 | **Chat Copilot Using Azure AI Studio** | LAB<br>■ Build your own Chat Copilot using your own data (Azure AI Studio)<br>■ Build your own Chat Copilot using your own data (Assistants API) |
| 03 | **Introduction to Prompt Flow Design** | **Lab:** Prompt flow design using templates (Standard flow, Chat flow & Evaluation flow) |
| 04 | **Create AI Agents & AI Memories Using Semantic Kernel** | **Hands-on/Lab:** Create AI Agents using Semantic Kernel |
| 05 | **Hands-on Implementation Using Semantic Kernel SDK** | LAB<br>■ Basic Labs on Semantic Functions<br>■ Adding plugins to Semantic Kernel<br>■ Adding memories to Semantic Kernel<br>■ Using connectors in Semantic Kernel<br>■ Chaining concept in Semantic Kernel<br>■ Integrating Bing with Azure OpenAI using Semantic Kernel |

WHAT IS INCLUDED

## Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

## Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

## Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

### Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com | info@koenig-solutions.com