

MS-AI3026: DEVELOP AI AGENTS ON AZURE



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Data & AI	Instructor-led	NA

INTRODUCTION

Generative Artificial Intelligence (AI) is becoming more functional and accessible, and AI agents are a key component of this evolution. This learning path will help you understand the AI agents, including when to use them and how to build them, using Azure AI Foundry Agent Service and Semantic Kernel Agent Framework. By the end of this learning path, you will have the skills needed to develop AI agents on Azure.

AUDIENCE PROFILE

This course is tailored for software developers who already have programming experience in Python or C# and want to deepen their skills in building AI agents using the Azure AI Agent Service. The target audience includes:

- Developers with a background in Python or C#.
- Those with conceptual knowledge of generative AI.
- Individuals familiar with Azure AI services.
- Professionals aiming to build scalable, intelligent AI-driven solutions using Azure tools.

PREREQUISITES

Before starting this module, you should be familiar with fundamental AI concepts and services in Azure. Consider completing the [Get started with artificial intelligence](#) learning path first.

COURSE OBJECTIVES

After attending this course, delegates will be able to:

- Create agents in the Azure AI Foundry portal.
- Develop agents using the Azure AI Agent Service SDK.
- Extend agent capabilities by integrating custom tools.
- Build agents with the Semantic Kernel SDK.
- Design multi-agent solutions that can collaborate and orchestrate tasks.

COURSE CONTENT

Module 1: Get started with AI agent development on Azure

AI agents represent the next generation of intelligent applications. Learn how they can be developed and used on Microsoft Azure.

Lessons

- Introduction
- What are AI agents?
- Options for agent development
- Azure AI Foundry Agent Service
- Exercise - Explore AI Agent development
- Module assessment
- Summary

After completing this module, students will be able to:

- Describe core concepts related to AI agents
- Describe options for agent development
- Create and test an agent in the Azure AI Foundry portal

Module 2: Develop an AI agent with Azure AI Foundry Agent Service

This module provides engineers with the skills to begin building agents with Azure AI Foundry Agent Service.

Lessons

- Introduction
- What is an AI agent
- How to use Azure AI Foundry Agent Service
- Develop agents with the Azure AI Foundry Agent Service
- Exercise - Build an AI agent
- Module assessment
- Summary

After completing this module, students will be able to:

- Describe the purpose of AI agents
- Explain the key features of Azure AI Foundry Agent Service
- Build an agent using the Foundry Agent Service

- Integrate an agent in the Foundry Agent Service into your own application

Module 3: Integrate custom tools into your agent

Built-in tools are useful, but they may not meet all your needs. In this module, learn how to extend the capabilities of your agent by integrating custom tools for your agent to use.

Lessons

- Introduction
- Why use custom tools
- Options for implementing custom tools
- How to integrate custom tools
- Exercise - Build an agent with custom tools
- Module assessment
- Summary

After completing this module, students will be able to:

- Describe the benefits of using custom tools with your agent.
- Explore the different options for custom tools.

- Build an agent that integrates custom tools using the Azure AI Foundry Agent Service.

Module 4: Develop an AI agent with Semantic Kernel

This module provides engineers with the skills to begin building Azure AI Foundry Agent Service agents with Semantic Kernel.

Lessons

- Introduction
- Understand Semantic Kernel AI agents
- Create an Azure AI agent with Semantic Kernel
- Add plugins to Azure AI agent
- Exercise - Develop an Azure AI agent with the Semantic Kernel SDK

- Knowledge check
 - Summary
- After completing this module, students will be able to:

- Use Semantic Kernel to connect to an Azure AI Foundry project
- Create Azure AI Foundry Agent Service agents using the Semantic Kernel SDK
- Integrate plugin functions with your AI agent

Module 5: Orchestrate a multi-agent solution using Semantic Kernel

Learn how to use the Semantic Kernel SDK to develop your own AI agents that can collaborate for a multi-agent solution.

Lessons

- Introduction
- Understand the Semantic Kernel Agent Framework
- Create an agent group chat
- Design an agent selection strategy
- Define a chat termination strategy
- Exercise - Develop a multi-agent solution
- Knowledge check
- Summary

After completing this module, students will be able to:

- Build AI agents using the Semantic Kernel SDK
- Develop multi-agent solutions
- Create custom selection and termination strategies for agent collaboration

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course.