

MS Agent Framework: Copilot Studio & MCP

Learn to build, orchestrate and govern AI agents with Copilot Studio, Microsoft Agent Framework and MCP tool integration.

10 Days

32 HOURS

12

MODULES

47

TOPICS

COURSE OVERVIEW

This course provides an enterprise-focused deep dive into building intelligent, scalable AI agents using Microsoft Agent Framework as the core foundation. It begins with no-code and low-code agent creation through Microsoft Copilot Studio for rapid prototyping, then transitions to a code-first approach to reveal how agents are implemented, extended, and governed using the Microsoft Agent Framework. Participants learn agent internals, workflows, observability, safety, and MCP-based tool integration, culminating in advanced multi-agent orchestration patterns. By the end of the course, learners can design and orchestrate production-ready AI agents across no-code, low-code, and fully coded Microsoft platforms with a clear end-to-end architectural understanding.

WHO THIS COURSE IS FOR

AI Developers

Solution Architects

Copilot Studio Makers

Platform Engineers

Automation Specialists

PREREQUISITES

- Basic understanding of AI and Large Language Models (LLMs)
- Familiarity with Python or similar programming languages
- General awareness of Microsoft 365, Azure, or enterprise application environments
- Learners should have their own active access to Azure subscription and copilot studio.

LEARNING OBJECTIVES

- Explain core components and use cases of AI agents
- Build conversational copilots in Copilot Studio
- Compare no-code, low-code and code-based agent approaches
- Implement agents using Microsoft Agent Framework building blocks
- Configure agent behaviours, guardrails and safety mechanisms
- Build and monitor workflows with executors and events
- Integrate MCP tools and servers with agents
- Design multi-agent orchestration and workflow composability patterns

12 Modules, 47 Topics

DAY 1

01

AI Agents - Foundations and Use Cases

TOPICS

- What is an AI agent
- **Core components:** model, memory, tools, workflows
- Differences between agents and traditional chatbots
- Enterprise use cases for AI agents

02

No-Code Agent Creation - Copilot Studio Overview

TOPICS

- Introduction to Microsoft Copilot Studio
- No-code and low-code agent creation philosophy
- **Core concepts:** copilots, topics/flows, triggers, channels
- Positioning Copilot Studio in the enterprise AI ecosystem

03

Low-Code Agent Creation - Copilot Studio Hands-on Lab

TOPICS

- Designing a simple conversational copilot
- Creating and managing conversation flows
- Publishing and testing copilots in supported channels
- Understanding the limitations of no-code and low-code approaches

04

Code-Based Agents - Introduction to Microsoft Agent Framework

TOPICS

- Why code-based agents are required
- Overview of Microsoft Agent Framework
- Relationship between Copilot Studio and Agent Framework
- Core agent and workflow capabilities

05

Core Building Blocks of Agents

TOPICS

- Model clients for chat completions and responses
- Agent threads and state management
- Context providers and agent memory
- Middleware for intercepting and extending agent behavior

06

Agent Types, Configuration, and Safety

TOPICS

- Agent types and behaviors
- Configuration options and runtime controls
- Instructions, guardrails, and safety mechanisms
- Designing enterprise-compliant agents

07

Workflow Foundations - Core Concepts

TOPICS

- Purpose and benefits of workflows
- **Workflow components:** executors, edges, workflows, events
- Workflow execution model
- Type safety and message routing

08

Building Workflows

TOPICS

Building workflows using WorkflowBuilder · Conditional routing and branching · Dynamic execution paths · Parallel execution and concurrency patterns

09

Workflow Events and Observability

TOPICS

Workflow lifecycle events · Executor and superstep events · Monitoring and debugging workflows · Observability best practices

10

MCP Fundamentals - Extending Agent Capabilities

TOPICS

- Introduction to the Model Context Protocol (MCP)
- Why MCP is needed in agentic systems
- **MCP core concepts:** servers, clients, tools, resources

11

Using MCP Tools with Agents

TOPICS

- Integrating MCP tools with Microsoft Agent Framework
- Connecting to MCP servers
- Invoking MCP tools from agents
- Designing agents that interact with external systems

12

Multi-Agent Orchestration and Advanced Patterns

TOPICS

- Need for multi-agent systems
- **Orchestration patterns:** sequential, concurrent, hand-off, supervisor
- Checkpointing and long-running workflows
- Workflow composability and nesting

NOTES

- There will be Demonstration shown and Hands-on Exercises given on all the modules during the course.

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.

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