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Advanced Microsoft Copilot Studio

Class Duration

14 hours of live training delivered over 2 days.

Student Prerequisites

- Hands-on experience building agents in Microsoft Copilot Studio
- An intermediate understanding of generative AI concepts
- Proficiency working with REST APIs
- Familiarity with the broader Microsoft cloud platform

Target Audience

Advanced makers and professional developers who design, extend, and integrate Copilot Studio agents. This course targets teams that automate real business processes by connecting agents to enterprise data, systems, and services, while applying sound design, security, governance, and responsible AI practices. It suits organizations moving from standalone agents to integrated, production-ready solutions across the Microsoft ecosystem.

Description

This course teaches how to design, build, and manage production-ready AI agent solutions in Microsoft Copilot Studio, with a focus on agents that integrate across systems and operate reliably at enterprise scale. Participants go beyond standalone agents to deliver end-to-end solutions that automate business processes, connect to enterprise data, and take meaningful action across platforms. The course covers advanced agent and conversation design, grounding on enterprise knowledge with Azure AI Search, and integration through custom connectors, REST APIs, and the Model Context Protocol. Participants build and orchestrate multi-agent solutions, automate complex scenarios including human-in-the-loop approvals and computer-use workflows, and apply identity, security, governance, and responsible AI throughout. The course closes with testing, evaluation, monitoring, and lifecycle management so agents are ready for real-world deployment. Content aligns with Microsoft's advanced Copilot Studio guidance for building integrated agent solutions.



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Learning Outcomes

- Design Copilot Studio agents that integrate with enterprise systems and data using connectors, APIs, Azure AI Search, and the Model Context Protocol.
- Engineer instructions, generative orchestration, and reusable components for reliable behavior at scale.
- Build and orchestrate advanced workflows and multi-agent solutions.
- Automate complex scenarios, including human-in-the-loop and computer-use workflows.
- Apply identity, security, governance, and responsible AI considerations during design and implementation.
- Test, trace, and evaluate agents against reliability and accuracy targets.
- Monitor and manage agents as enterprise-grade solutions through their lifecycle.

Training Materials

Comprehensive courseware is distributed online at the start of class. All students receive a downloadable MP4 recording of the training.

Software Requirements

Students need access to Microsoft Copilot Studio in a Power Platform environment, a Microsoft 365 tenant, and permissions to create connectors and flows. Access to Azure resources including Azure AI Search is recommended for the integration topics. A web browser and a REST client are useful for working with APIs.

Training Topics

Advanced Agent Design

- Designing agent conversations, responses, and topics at scale
- Generative orchestration for complex behavior
- Instruction and prompt engineering for reliability
- Managing agent state and context across turns
- Reusable components and solution structure

Grounding on Enterprise Data

- Grounding agents in enterprise knowledge



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- Azure AI Search as a knowledge source
- Retrieval quality, citations, and freshness
- Scoping access to sensitive content
- Evaluating grounding accuracy

Integrating with Systems and APIs

- Custom connectors and REST API calls
- Authentication for connected systems
- Model Context Protocol integration
- Passing inputs, handling outputs, and managing errors
- Designing integrations for resilience

Advanced Automation Workflows

- Deterministic workflows used as agent tools
- Power Automate integration patterns
- Human-in-the-loop review and approvals
- Computer-use automation scenarios
- Coordinating long-running processes

Multi-Agent Solutions

- Designing multi-agent architectures
- Connecting and orchestrating multiple agents
- Supervisor, worker, and handoff patterns
- Agent-to-agent delegation and coordination
- Combining Copilot Studio with Microsoft 365 and Foundry agents

Testing and Evaluation

- Structured testing of agent behavior
- Tracing and debugging conversations
- Evaluating reliability and accuracy
- Gating releases on quality results
- Regression checking as agents evolve

Identity, Security, and Governance

- Authentication and Microsoft Entra
- Data loss prevention and environment policies
- Governance, solution management, and lifecycle
- Auditing and compliance



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- Managing agents across environments

Monitoring and Responsible AI

- Monitoring agents in production
- Analytics and operational metrics
- Content safety and guardrails
- Responsible AI practices for deployment
- Operating and maintaining agents over time