



MICROSOFT TRAINING

AZ-2005: Develop AI Agents Using Azure OpenAI and the Semantic Kernel SDK

Develop powerful AI agents with Azure OpenAI and the Semantic Kernel SDK. Prepare for your AZ-2005 certification.

DURATION

24 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level course, "AZ-2005: Develop AI Agents Using Azure OpenAI and the Semantic Kernel SDK," is meticulously designed for developers eager to harness the power of large language models (LLMs) and build sophisticated AI agents on Microsoft Azure. Participants will delve deep into the capabilities of Azure OpenAI services, learning how to leverage its advanced models for natural language processing, generation, and comprehension. The core focus will be on mastering the Semantic Kernel SDK, an open-source framework that simplifies the orchestration of AI models, enabling the creation of intelligent agents capable of complex reasoning, planning, and interaction with external tools and services. Through hands-on labs and practical exercises, you will gain the expertise to design, develop, and deploy AI agents that can automate tasks, provide intelligent assistance, and enhance user experiences. The course covers everything from prompt engineering and function calling to integrating memory, planning, and connectors with other systems. By completing this certification, you will not only validate your skills in cutting-edge AI development but also position yourself as a crucial asset in organizations seeking to innovate and transform their operations using responsible and scalable AI solutions on the Azure platform. This expertise opens doors to building next-generation intelligent applications.

Duration	24 hours
Level	Intermediate
Vendor	Microsoft
Exam Code	AZ-2005

COURSE CURRICULUM

01 Module 1: Introduction to Azure OpenAI and AI Agents

- Understanding Large Language Models (LLMs) and their applications
- Overview of Azure OpenAI Service capabilities and models
- Introduction to AI Agent concepts and architecture
- Prompt engineering fundamentals and best practices
- Azure OpenAI Playground and API interaction

02 Module 2: Semantic Kernel SDK Fundamentals

- Introduction to the Semantic Kernel SDK
- Core components: Kernels, Skills, and Plugins
- Creating and managing semantic functions (prompts)
- Creating and managing native functions (code-based logic)
- Understanding contexts and variables

03 Module 3: Building AI Agents with Semantic Kernel

- Developing basic conversational agents
- Implementing sequential and conditional logic in agents
- Using planners for complex task orchestration
- Integrating multiple skills and plugins within an agent
- Error handling and robust agent design

04 Module 4: Integrating External Systems and Memory

- Connecting AI agents to external APIs and databases
- Leveraging connectors and custom plugins
- Implementing short-term and long-term memory for agents

- Utilizing vector databases for retrieval augmented generation (RAG)
- Managing state and context across agent interactions

05 Module 5: Advanced Agent Development and Deployment

- Building multi-agent systems and collaboration patterns
- Testing and debugging Semantic Kernel agents
- Performance optimization for AI agents
- Deployment strategies for Azure-based AI agents
- Monitoring and managing agent lifecycle

06 Module 6: Responsible AI and Best Practices

- Understanding Responsible AI principles in agent development
- Mitigating bias and ensuring fairness in LLM interactions
- Security considerations for AI agents on Azure
- Ethical guidelines for deploying AI systems
- Future trends in AI agent development

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Azure AI Developer specializing in Agentic AI**
- > **Conversational AI Engineer with Semantic Kernel expertise**
- > **Solutions Architect for Intelligent Automation leveraging Azure OpenAI**

FREQUENTLY ASKED QUESTIONS

Q: What specific development skills will I acquire that are directly applicable to building production-ready AI agents with this course?

This course provides hands-on expertise in prompt engineering, integrating custom and native functions using the Semantic Kernel SDK, developing sophisticated planners for task orchestration, implementing memory management for contextual conversations, and connecting agents to external enterprise systems. You'll gain practical skills in building, testing, and deploying scalable AI agent solutions on Azure.

Q: Is prior experience with Azure or AI development required, and what are the recommended prerequisites for AZ-2005?

While not strictly mandatory, intermediate proficiency in C# or Python programming is highly recommended, as the Semantic Kernel SDK is primarily used with these languages. Basic familiarity with cloud concepts, particularly Azure, and a foundational understanding of AI/ML concepts will be beneficial to maximize your learning experience in this course.

Q: How does this AZ-2005 certification differentiate my profile for roles focused on integrating AI into existing business applications?

This certification specifically validates your ability to develop and integrate intelligent AI agents using the cutting-edge Azure OpenAI Service and the Semantic Kernel SDK. Unlike general AI certifications, AZ-2005 focuses on practical application development, enabling you to design agents that can interact with line-of-business applications, automate complex workflows, and provide intelligent decision support, making you invaluable for roles requiring AI integration

specialists.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

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READY TO ENROL?

Take the next step in your technology career.

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