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AI-103 Develop AI Apps and Agents on Azure

Build generative AI apps, agents and agentic workflows with Microsoft Foundry.

Course description

This course is for software developers who want to build AI-infused applications using Microsoft Foundry. It lays a strong foundation for designing intelligent solutions that plug into modern cloud-based AI services, and shows how to build applications with advanced AI features that stay scalable, reliable and performant in real-world scenarios.

Topics include developing generative AI applications with large language models, building intelligent AI agents, and creating solutions that bring knowledge sources and external tools into agentic workflows. Learners explore how to design applications that can reason, retrieve relevant information and take action, delivering more dynamic, context-aware user experiences.

The course also covers multimodal capabilities for working with text, images and other data types, along with techniques for understanding and processing complex content. By the end, participants can build robust, production-ready AI applications that meet enterprise requirements and deliver business value.

Course details

Level: Intermediate
Duration: 4 Days

Activities

This course includes presentations, demonstrations, and labs. Hands-on labs are designed around real-world business scenarios to build practical understanding and application skills.

Course objectives

In this course, you will learn to:

- Develop and deploy generative AI applications using Azure AI Foundry and large language models.
- Design and implement AI agents with tool usage, memory and reasoning capabilities.
- Build agentic workflows that integrate external tools and enterprise knowledge sources.
- Implement retrieval-augmented generation (RAG) for context-aware AI solutions.
- Create multimodal AI applications that handle text, images and complex content.
- Use Azure SDKs and APIs to build scalable, production-ready AI solutions.
- Manage and orchestrate multi-step AI workflows and agent-based architectures.
- Apply responsible AI practices, including safety, evaluation and performance monitoring.
- Monitor, evaluate and optimize AI model performance and application behavior.
- Design AI solutions aligned with real-world enterprise use cases and scalability requirements.

Learning objectives of the AI-103 course

- Develop and deploy generative AI applications with Microsoft Foundry, using large language models for real-world enterprise use cases.
- Design and implement AI agents with reasoning, tool integration and multi-step workflows for intelligent, automated decision-making.
- Build agentic AI solutions that integrate enterprise data, APIs and external tools for contextual, dynamic applications.
- Implement retrieval-augmented generation (RAG) patterns that improve AI responses with domain-specific knowledge and data sources.
- Develop multimodal AI applications that process text, images and complex content for richer user interactions.
- Apply responsible AI practices, including content safety, evaluation metrics and governance, for secure and ethical AI solutions.
- Build, deploy and manage production-ready AI solutions with scalability, monitoring and performance optimization in Azure environments.

Intended audience

This intermediate-level course is intended for developers who want to build AI-powered applications and agents on Azure, including:

- Software engineers and developers focused on building, managing and deploying AI solutions with Microsoft Foundry.
- Developers with Python knowledge who want to create AI-powered applications and workflows.
- Professionals experienced with APIs and SDKs for integrating AI capabilities into applications.
- Engineers interested in building agents and generative AI solutions on Azure platforms.

Prerequisites for the AI-103 Exam Course

Prerequisites for this intermediate-level course:

- Basic programming knowledge in Python, including working with functions and libraries.
- Understanding of REST APIs and SDK usage for integrating external services.
- Familiarity with cloud concepts, preferably Microsoft Azure fundamentals.
- Basic knowledge of AI/ML concepts, such as models, training and inference.
- Understanding of software development practices, including application design and debugging.
- Experience with data handling, such as working with JSON, text or structured data.
- Exposure to command-line tools or development environments (for example, VS Code).

Course outline

Module 1 Develop generative AI apps in Azure

Module 2 Develop AI agents on Azure

Module 3 Develop natural language solutions in Azure

Module 4 Extract insights from visual data on Azure

Key features of the AI-103 course

- **Focus on generative AI development:** build AI-powered applications with large language models and modern generative AI capabilities.
- **AI agent development and agentic architectures:** design intelligent agents with reasoning, tool usage and multi-step workflows.
- **Microsoft Foundry integration:** hands-on experience building, managing and deploying AI solutions with Microsoft Foundry.
- **Knowledge integration and RAG:** connect AI models with enterprise data and external tools for contextual intelligence.
- **Multimodal AI capabilities:** develop applications that process and understand text, images and complex content.
- **Production-ready solution development:** design scalable, real-world AI applications with monitoring, evaluation and deployment strategies.
- **End-to-end application lifecycle:** covers planning, development, deployment, evaluation and optimization of AI systems.

Why choose CloudThat as your training partner for AI-103?

- Certified trainers with extensive enterprise AI experience, offering practical, industry-relevant insights.
- Hands-on labs built around real-world business scenarios to strengthen practical skills.
- Industry-focused curriculum aligned with the latest trends in AI, cloud technologies and enterprise solution development.
- Continuous support and mentorship throughout the learning journey for clarity, confidence and skill growth.

- Proven success with Microsoft certifications and a strong record of learner achievement and career advancement.
- Outcome-driven training focused on building job-ready skills and delivering measurable business impact.

Certification details

- This course prepares learners for the **Microsoft Certified: Azure AI App and Agent Developer Associate (AI-103)** certification, which focuses on modern generative and agentic AI architectures.
- The certification validates skills in building generative AI applications, multi-step reasoning workflows and production-ready AI agents with Microsoft Foundry and Azure services.
- Candidates are assessed on their ability to design, develop and manage AI solutions, including integrating enterprise data, tools and APIs within agent-based systems.
- The certification is aligned with real-world enterprise scenarios, so professionals can implement scalable, secure and business-ready AI solutions.
- The certification exam is expected to launch in 2026 (beta followed by general availability), reflecting the latest advances in generative AI and agent-based solution development.

Frequently asked questions

What is the AI-103 course about?

AI-103 focuses on building generative AI applications, AI agents and agentic workflows with Microsoft Foundry and Azure AI services.

Who should take this course?

Software developers with Python and API knowledge who want to build AI-powered applications on Azure platforms.

Do I need prior AI or machine learning experience?

A basic understanding of AI/ML concepts is helpful, but strong programming knowledge and familiarity with APIs and cloud concepts matter more.

What skills will I gain from this course?

Generative AI development, agent design, RAG implementation, multimodal AI and deploying production-ready AI applications on Azure.

What tools and technologies are covered?

Microsoft Foundry, Azure AI services, large language models, APIs, SDKs and tools for building and managing AI applications.

What job roles can I apply for after this course?

AI Developer, Azure AI Engineer, ML Engineer and AI Solutions Architect roles working on enterprise AI applications.

What is the salary after completing this course or certification?

Azure AI professionals in India earn approximately INR 8–20 LPA, while experienced roles can reach INR 50 LPA or higher.

Is there a certification associated with this course?

Yes. The course prepares you for the Microsoft Azure AI App and Agent Developer Associate (AI-103) certification exam.

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Your course overview ends here.
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About CloudThat

Established in 2012, CloudThat is an award-winning company and the first in India to offer cloud training and consulting services for individuals and enterprises worldwide. Recently, it won Google Cloud's New Training Partner of the Year Award for 2025, becoming the first company in the world in 2025 to hold awards from all three major cloud giants: AWS, Microsoft, and Google. CloudThat notably won consecutive AWS Training Partner of the Year (APJ) awards in 2023 and 2024 and the Microsoft Training Services Partner of the Year Award in 2024, bringing its total award count to an impressive 12 awards in the last 8 years.

CloudThat specializes in Cloud Migration, Data Platforms, DevOps, IoT, and cutting-edge technologies like Gen AI & AI/ML. As a Microsoft Solutions Partner, AWS Premier Tier Training Partner, Google Cloud Platform Partner, and collaborator with leading organizations like HPE, Oracle, Nvidia and Databricks, CloudThat has trained over 850,000 professionals across 600+ cloud certifications, empowering students and professionals worldwide to advance their skills and careers.

To know more about our cloud certification training, email at sales@cloudthat.com or call us at +91-8880002200 or +1-8555588830 for those from outside India.