

AI-200: Azure AI Cloud Developer

Build cloud-native Azure applications that use AI models safely, scale on demand and are ready for production — and prepare for AI-200.

DURATION

5 days · 40 hours

LEVEL

Intermediate

CURRICULUM

16 modules · 14 labs

DELIVERYLive online, Onsite,
Corporate

Course overview

Application developers on Azure are now expected to do more than deploy a web app and connect it to a database. Teams want features that summarise documents, answer questions over company data or classify incoming requests, and they want those features built with the same discipline as the rest of the application: secure secrets, sensible scaling and proper monitoring. This five-day course trains you to do exactly that.

The course follows a single project. On day one you host an API on App Service, Azure Functions and Azure Container Apps and compare how each scales. Day two adds data with Blob Storage and Azure Cosmos DB through the SDKs. Day three secures the application with Microsoft Entra ID app registrations, managed identities, Key Vault and App Configuration.

Day four is about AI: calling hosted models from your code, writing effective system prompts, generating embeddings and building retrieval-augmented generation with Azure AI Search. You also add content filtering and simple evaluation so responses can be trusted. Day five connects services with API Management, Event Grid and Service Bus, instruments everything with Application Insights and closes with exam preparation.

Labs are written in C# with Python alternatives where practical, and each one builds on the previous so you finish with a working, deployable solution in your own repository.

This course is aligned to the AI-200 exam, reported as the developer path following the retirement of AZ-204 on 31 July 2026. Because the exam is new, confirm the current skills outline on Microsoft Learn before booking; we update the course as details are published.

Highlights

- 40 hours of live, code-along sessions
- Builds one application end to end across the five days
- App Service, Functions, Container Apps, Cosmos DB and AI models
- Managed identities and Key Vault used from Day 1
- Successor path for developers who planned to take AZ-204

What's included

- Single end-to-end project built across five days
- Code-along labs in C# with Python alternatives
- Retrieval-augmented generation with Azure AI Search
- Passwordless design with managed identities from the start
- API Management, Event Grid and Service Bus integration
- Application Insights tracing and troubleshooting
- Exam strategy session and practice questions
- 30 days of post-training doubt support

Who this course is for

Who should attend

- Software developers building applications on Azure
- Developers who were preparing for the retired AZ-204 exam
- Back-end and API engineers adding AI features to products
- Solution engineers who prototype on Azure for clients
- DevOps engineers who need stronger development depth

Prerequisites

- At least one year of programming experience in C#, Python or a similar language
- Comfort with REST APIs, JSON and Git
- Basic familiarity with the Azure portal (AZ-900 level)
- A laptop with VS Code or Visual Studio installed

Detailed curriculum — 5 days, 40 hours, 16 modules, 14 hands-on labs

Day 1 Azure Compute for Developers

8 hours

1.1 App Service

- App Service plans and scaling rules
- Deployment slots and swaps
- Configuration and application settings
- Diagnostics and log streaming

LAB Deploy an API to App Service with a staging slot · 50 min

1.2 Azure Functions

- Triggers, bindings and hosting plans
- Local development and debugging
- Durable Functions patterns
- Cold starts and concurrency

LAB Build an HTTP and queue-triggered Function · 50 min

1.3 Containers

- Building images and pushing to Azure Container Registry
- Dapr and service-to-service calls overview
- Azure Container Apps revisions and scaling
- Choosing between Functions, App Service and Container Apps

LAB Containerise the API and deploy to Container Apps · 55 min

Day 2 Storage and Data

8 hours

2.1 Blob Storage from code

- Storage SDK clients and authentication
- Lifecycle policies and access tiers
- Uploads, metadata and properties
- Change feed and event-driven processing

LAB Upload, tag and list documents with the Blob SDK · 45 min

2.2 Azure Cosmos DB

- Data modelling and partition keys
- SDK operations and request units
- Vector search in Cosmos DB overview
- Consistency levels
- Change feed processors

LAB Model and query application data in Cosmos DB · 60 min

2.3 Caching and relational data

- Azure Cache for Redis patterns
- Choosing a data store for each workload
- Connecting to Azure SQL Database securely

LAB Add a Redis cache in front of a slow query · 35 min

Day 3 Security and Identity

8 hours

3.1 Microsoft Entra ID for developers

- App registrations and service principals
- Microsoft Authentication Library (MSAL)
- OAuth 2.0 and OpenID Connect flows
- Calling Microsoft Graph

LAB Protect the API with Entra ID and call it from a client · 55 min

3.2 Secrets and configuration

- Managed identities: system- and user-assigned
- Azure App Configuration and feature flags
- Azure Key Vault secrets, keys and certificates
- Shared access signatures and when to avoid them

LAB Remove all secrets from code with managed identity and Key Vault · 50 min

3.3 Securing AI endpoints

- Keyless access to model endpoints
- Quotas, rate limits and cost controls
- Network isolation options

Day 4 Integrating AI Models

8 hours

4.1 Calling models from code

- Model deployments and endpoints
- Structured outputs and function calling
- Token usage and cost
- Chat completions and system prompts
- Streaming responses

LAB Add a summarisation feature to the application · 50 min

4.2 Retrieval-augmented generation

- Embeddings and chunking strategies
- Hybrid search and semantic ranking
- Azure AI Search indexes and vector search
- Grounding answers with citations

LAB Build a RAG endpoint over your own documents · 75 min

4.3 Responsible and reliable AI

- Content filtering and safety settings
- Handling failures, retries and fallbacks
- Evaluating response quality

LAB Add content filtering and a simple evaluation run · 30 min

Day 5 Integration, Monitoring and Exam Readiness

8 hours

5.1 API Management

- Products, subscriptions and policies
- Fronting AI endpoints through a gateway
- Rate limiting and caching policies

LAB Publish the API through API Management with a rate-limit policy · 45 min

5.2 Event- and message-based solutions

- Event Grid topics and subscriptions
- Event Hubs at a glance
- Service Bus queues and topics
- Choosing the right messaging service

LAB Process uploads asynchronously with Event Grid and Service Bus · 50 min

5.3 Monitoring and troubleshooting

- Application Insights instrumentation
- Availability tests and alerts
- Distributed tracing and dependency maps
- Investigating failures with KQL

LAB Trace a failing request end to end · 35 min

5.4 Exam readiness

- Exam format and question styles
- Practice questions with review
- Reading code-based questions

Skills and tools

Skills you will build

Azure App Service

Azure Functions

Azure Container Apps

Azure Cosmos DB

Blob Storage SDK

Managed identities

Azure Key Vault

MSAL

Embeddings

RAG

Azure AI Search

API Management

Event Grid

Service Bus

Application Insights

Tools used in class

Visual Studio Code

Visual Studio

.NET SDK

Python

Azure CLI

Azure Functions Core Tools

Docker

Git

Azure portal

Azure AI Foundry

Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam	Azure AI Cloud Developer (AI-200)
Exam code	AI-200
Delivery	Online proctored, Test centre
Validity	1 year (free online renewal assessment)
Official page	https://learn.microsoft.com/credentials/

Exam skill areas covered

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

I was preparing for AZ-204. Is this the right course?

Yes. AZ-204 retired on 31 July 2026 and AI-200 is the reported successor; this course keeps the core Azure development skills and adds the AI integration the newer exam expects.

Which programming language do the labs use?

Labs are written in C# with Python alternatives for most exercises. You can complete the course in either language.

Do I need prior AI or machine learning experience?

No. You will call hosted models through SDKs and APIs; no model training or data science background is required.

What happens if Microsoft updates the AI-200 exam?

We map the curriculum to the current published skills outline and revise it when Microsoft changes the exam. Always check the latest outline on Microsoft Learn before booking.

Do you run weekend batches?

Yes. Weekend batches cover the same 40 hours across consecutive Saturdays and Sundays, with timings in IST that also suit learners in the Gulf.

Can you run a private batch for our team?

Yes. We run private online or onsite batches for corporate teams, and we can weight the labs towards your own application stack. Request a corporate quote with your team size and preferred dates.

Book a batch or talk to an advisor

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