

MICROSOFT OFFICIAL CURRICULUM

Microsoft

# Machine Learning Operations (MLOps) Engineer Associate (beta)

AI-300

As a candidate for this Microsoft Certification, you should have subject matter expertise in setting up infrastructure for machine learning operations (MLOps) and generative AI operations (GenAIOps) solutions on Azure, together referred to as AI operations (AIOps).

AI

Intermediate

Azure Machine Learning, Microsoft Foundry

DURATION

4 days

LEVEL

Intermediate

FORMAT

Virtual, On-site, or Hybrid

CERTIFICATION

**Microsoft Certified: Machine Learning Operations (MLOps) Engineer Associate (beta)**

AUDIENCE PROFILE

## Built for these roles

This course is intended for data scientists, machine learning engineers, and DevOps professionals who want to design and operate production-grade AI solutions on Azure. It is suited for learners with experience in Python, a foundational understanding of machine learning concepts, and basic familiarity with DevOps practices such as source control, CI/CD, and command-line tools, who are preparing to implement MLOps and GenAIOps workflows using Azure-native services.

OVERVIEW

## Executive overview

This course prepares learners to design, implement, and operate Machine Learning Operations (MLOps) and Generative AI Operations (GenAIOps) solutions on Azure. It covers building secure and scalable AI infrastructure, managing the full lifecycle of traditional machine learning models with Azure Machine Learning, and deploying, evaluating, monitoring, and optimizing generative AI applications and agents using Microsoft Foundry. Learners will gain hands-on knowledge of automation, continuous integration and delivery, infrastructure as code, and observability by using tools such as GitHub Actions, Azure CLI, and Bicep. The course emphasizes collaboration with data science and DevOps teams to deliver reliable, production-ready AI systems aligned with modern MLOps and GenAIOps best practices.

PROGRAM OUTCOMES

## Capabilities your teams will gain

- Design and implement an MLOps infrastructure
- Implement machine learning model lifecycle and operations
- Design and implement a GenAIOps infrastructure
- Implement generative AI quality assurance and observability

TRAINING PROVIDER

**VNode ITeS**


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## ENTERPRISE CUSTOMIZATION

### Enterprise customization

Tailor this program to your organization's priorities: Builds current Microsoft credential readiness for Machine Learning Operations (MLOps) Engineer Associate (beta) using the official Microsoft Learn skill outline.

#### Customization options

- Align labs to your Microsoft tenant and workload scenarios
- Add readiness checks and exam preparation reviews
- Extend delivery with role-specific implementation workshops

## CURRICULUM

### Curriculum roadmap

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#### MODULE 1

### Operationalize machine learning models (MLOps)

Learn the full MLOps lifecycle for machine learning models, from experimentation and pipeline automation to CI/CD, automated testing, and model deployment in production.

- Experiment with Azure Machine Learning
- Perform hyperparameter tuning with Azure Machine Learning
- Run pipelines in Azure Machine Learning
- Trigger Azure Machine Learning jobs with GitHub Actions
- Trigger GitHub Actions with feature-based development
- Work with environments in GitHub Actions
- Deploy a model with GitHub Actions

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#### MODULE 2

### Operationalize generative AI applications (GenAIOps)

Learn the full GenAIOps lifecycle for generative AI applications, from planning and prompt management to evaluation, automated testing, monitoring, and tracing in production.

- Plan and prepare a GenAIOps solution
- Manage prompts for agents in Microsoft Foundry with GitHub
- Evaluate and optimize AI agents through structured experiments
- Automate AI evaluations with Microsoft Foundry and GitHub Actions
- Monitor your generative AI application
- Analyze and debug your generative AI app with tracing

## PRIVATE DELIVERY

### Plan a private cohort for your team

Scope delivery format, role mix, and rollout timeline with our solutions team.





Plan Private Delivery

Book advisory call

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