



**MFE-IT**  
Mes Formations d'Expertise

Reference: AI-103

# Microsoft AI-103 Training Course

*Developing AI Apps and Agents on Azure*

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**Duration:** 4 days (24 h)

*Remote or on-site · Sessions guaranteed from 1 registrant · 60% hands-on practice*

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## DESCRIPTION

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This Microsoft AI-103 – Developing AI Apps and Agents on Azure course prepares developers and engineers to design, secure and deploy AI applications and agents on Azure with Microsoft Foundry, the unified platform for model management and agent orchestration.

You will learn to build generative and agentic AI solutions (Azure OpenAI, RAG with Azure AI Search), handle vision, language and information extraction, and apply production and responsible-AI best practices.

Through hands-on labs, you will develop real AI apps and agents and master their secure implementation on Azure.

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## LEARNING OBJECTIVES

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By the end of this training course, participants will be able to:

- Plan, provision and manage an Azure AI solution in Microsoft Foundry: service selection, deployment options, networking, RBAC, quotas, costs, monitoring and responsible AI.
- Design and implement generative AI and agentic solutions: Foundry projects, prompt engineering, Azure OpenAI models, RAG pipelines with Azure AI Search, multi-agent orchestration and conversation memory.
- Develop computer vision solutions: image analysis, OCR, image and video generation from prompts, multimodal processing.
- Implement LLM-first text analysis solutions: entity extraction, classification, summarisation, translation and speech recognition with Azure AI Language and Speech.
- Build information extraction pipelines with Azure AI Document Intelligence and Content Understanding (documents, images, audio, video) to power RAG scenarios.

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## PREREQUISITES

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- Application development experience in Python.
- Familiarity with general AI, generative AI concepts and Azure services.
- Proficiency with REST APIs and SDKs to integrate Azure AI services.
- Knowledge of Azure fundamentals (portal, resources); AI-900 or equivalent recommended.

Because each participant is unique, a personalised interview is systematically organised in advance with our expert to design a training programme perfectly aligned with their objectives, level and professional challenges.

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## TARGET AUDIENCE

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- Developers and Azure AI engineers building apps and agents with Microsoft Foundry.
- Python developers integrating AI into business applications.
- Technical teams aiming to master generative AI, agents, RAG and Azure AI services.

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## DETAILED PROGRAMME

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The training alternates between theoretical input and hands-on practice (approximately 60% of the time). Modules follow the five domains of the Microsoft AI-103 syllabus, completed by a capstone project.

### Module 1 – Plan and manage an Azure AI solution

- Azure AI service selection and setup in Microsoft Foundry.
- Networking, private endpoints and security; RBAC (Cognitive Services OpenAI User vs Contributor).
- Quotas, cost management and monitoring with Application Insights.
- Responsible AI principles and CI/CD integration.

### Module 2 – Implement generative AI and agentic solutions

- Foundry projects and deployments; prompt engineering.
- Azure OpenAI model selection and fine-tuning.
- RAG pipelines with Azure AI Search; conversation memory.
- Agent design (tools, orchestration), multi-agent systems and evaluation (groundedness).

### Module 3 – Implement computer vision solutions

- Image analysis and OCR.
- Image and video generation from prompts and reference media.
- Editing workflows (inpainting, masks).
- Spatial video analysis.

### Module 4 – Implement text analysis solutions

- Entity extraction, classification and summarisation with Azure AI Language.
- Speech recognition and processing with Azure AI Speech.
- Translation and LLM-first approach.

### Module 5 – Implement information extraction solutions

- Azure AI Document Intelligence: prebuilt and custom models.
- Content Understanding across documents, images, audio and video.
- Ingestion and structuring to feed RAG pipelines.

### Module 6 – Capstone project

- Building an end-to-end AI solution on Microsoft Foundry.
- Combining agent(s), multimodal RAG, governance and security.
- End-to-end deployment and final demonstration.

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## TEACHING METHODS

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### Format and Delivery

The training is delivered remotely via an interactive virtual classroom. It can also be delivered on-site, with content customised to match the needs of your professional project. The theory/practice split is approximately 40%/60%. The programme combines theoretical input, demonstrations, hands-on work on a guiding project and discussion between participants and trainer.

### MFE-IT Ultra-Personalised Format

Each session accommodates between 1 and 3 participants, ensuring highly individualised support. A preliminary interview allows us to tailor the content to each participant's profile: level, objectives, professional context and challenges. Inter-company sessions are **guaranteed from just 1 registrant** (except in cases of force majeure).

### Technical Means

The training is accessible from any workstation with a high-speed Internet connection. Before the start, our team contacts each participant to validate the technical environment and present the platform. Throughout the training, participants benefit from technical and educational support by email, with a response time not exceeding 24 working hours.

### Skills Assessment

Throughout the training, the trainer assesses participant progress through multiple-choice questions, role-playing exercises and hands-on work. The small group size makes individual validation possible at the end of each workshop. At the end of the training, a certificate of validated skills is issued to each participant, stating the objectives, nature, duration and assessment results.

### Post-Training Support

For one month following the training, each participant can contact MFE-IT trainers with questions about implementing acquired knowledge. A response is provided by email or telephone within 48 working hours.

### Accessibility

MFE-IT is committed to welcoming people with disabilities. For any accommodation request, a discussion with our disability officer helps identify specific needs and adapt the training. Contact: [contact@mfe-it.com](mailto:contact@mfe-it.com).

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## PRACTICAL INFORMATION

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### Trainer Resources

- Structured demonstrations aligned with the detailed programme.
- Exercise briefs and solutions throughout the training.
- A ready-to-use technical environment for practical workshops.
- Trainer validation of acquired knowledge at the end of each workshop.
- Digital reference documents.

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## Certification and Validation

At the end of the training, a certificate is sent by email specifying the objectives, nature, duration and assessment results. A completion certificate can also be provided on request. This course prepares for the Microsoft AI-103 certification (Azure AI Apps and Agents Developer Associate), which replaces AI-102; MFE-IT is not Qualiopi-certified and does not directly manage CPF or OPCO funding.

## Type of Training

Professionalising training action, aimed at improving and broadening participants' skills.

## Monitoring

Participant attendance is verified by signing an attendance sheet per half-day, countersigned by the trainer. Participants put the course material into practice through hands-on work on individual workstations; skills are validated by the trainer at the end of each workshop.

## Benefits for Participants

- Train from your workplace or home, with no travel required.
- Benefit from an expert trainer-consultant on the subject.
- Enjoy an ultra-personalised format (1 to 3 participants) that encourages interaction and practice.
- Continue training even in the event of unforeseen circumstances.

## Benefits for the Organisation

- Optimise the training budget by reducing travel and accommodation costs.
- Offer quality training to all employees, regardless of location.
- Reduce absence time linked to travel.
- Support team upskilling in all contexts.