ENTERPRISE PROGRAM BRIEF

Applied AI Engineering with Microsoft Foundry

Build a grounded enterprise assistant with bounded tools and measurable quality.

VNode ITeS | E02

DURATION	LEVEL	FORMAT
56 hours	Practitioner / specialist	Private cohort

AUDIENCE PROFILE

Built for these roles

Python developers, AI engineers

OVERVIEW

Executive overview

Build a grounded enterprise assistant with bounded tools and measurable quality. Proposed instructor-led duration; delivery subject to environment and lab validation.

READINESS

Prerequisites

- Python API client competence
- Azure identity and resource fundamentals
- AI and Generative AI Foundations, or equivalent demonstrable experience
- Python, APIs and Git for AI Engineering, or equivalent demonstrable experience
- Azure Foundations for AI Delivery, or equivalent demonstrable experience

PROGRAM OUTCOMES

Capabilities your teams will gain

- Deliver a grounded Foundry application with a bounded tool
- Compare versions using schema, retrieval and task-quality evidence
- Prove denied access, safe action approval and injection handling
- Provide reproducible deployment, tracing and operational ownership

ENTERPRISE CUSTOMIZATION

Enterprise customization

Tailor this program to your organization's priorities: Build a grounded enterprise assistant with bounded tools and measurable quality.

- Private cohort scheduling
- Equivalent-experience entry review

CURRICULUM

Curriculum roadmap

1

MODULE 1 · 8 HOURS

Application and model contracts

Build a model client with validated response structure and compare approved deployments.

- Business acceptance
- Model selection
- Structured output
- Cost and latency baseline

2

MODULE 2 · 8 HOURS

Grounding and retrieval engineering

Build a permission-aware retrieval path over synthetic policy documents.

- Document ingestion
- Chunking
- Hybrid retrieval concepts
- Citations and access filtering

3

MODULE 3 · 8 HOURS

Prompt and hosted agent choices

Implement one bounded agent and justify its runtime and framework choice.

- Managed versus custom orchestration
- Agent Framework
- State
- Tool contracts

4

MODULE 4 · 8 HOURS

Tools, APIs and controlled execution

Connect an internal request API with strict input validation and explicit action confirmation.

- Function and MCP concepts
- Authentication
- Approval
- Retries and idempotency

5

MODULE 5 · 8 HOURS

Evaluation and adversarial testing

Compare a baseline and revised version using deterministic checks and calibrated judges.

- Gold datasets
- Groundedness
- Task success
- Injection and refusal tests

6

MODULE 6 · 8 HOURS

Deployment and observability

Deploy to the approved environment and trace an injected tool failure.

- Scoped identity
- Secrets
- Tracing
- Release and rollback concepts

7

MODULE 7 · 8 HOURS

Applied engineering capstone

Deliver the assistant with quality results, access tests and a reproducible handover.

- End-to-end acceptance
- Access boundaries
- Operational documentation
- Demonstration

PREPARATION

Environment prerequisites

Isolated Azure subscription/resource group Scoped deployment rights and resource-provider access Approved region, quota and optional model deployment Cost budget and cleanup plan Delivery depends on environment and lab validation. This outline does not include step-by-step lab instructions.

CAPSTONE

Capstone

Deliver the assistant with quality results, access tests and a reproducible handover. Assessed Foundry AI application Evidence of relevant access, quality and risk controls Demonstration and limitations record

ASSESSMENT

Assessment

Scenario-based practical assessment Deliver a grounded Foundry application with a bounded tool 30% Compare versions using schema, retrieval and task-quality evidence 25% Prove denied access, safe action approval and injection handling 25% Provide reproducible deployment, tracing and operational ownership 20% Proposed VNode outline-level assessment; no vendor accreditation or completed lab validation implied.

DELIVERABLES

Participant deliverables

- Assessed Foundry AI application
- Evidence of relevant access, quality and risk controls
- Demonstration and limitations record

SCOPE

Scope boundaries

Step-by-step lab instructions; Runnable solution code; Packaged source datasets; Executed environment validation

DELIVERY

Delivery options

Count teaching hours, not calendar days. Exclude breaks. Split into 4-hour or 8-hour teaching sessions; schedule complex project work in contiguous blocks. Proposed hours exclude breaks and are subject to pilot validation.

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