

AI-102T00: Develop AI Solutions in Azure (custom.dtcc)

6-Day Training Program — 8 Hours per Day (Total: 48 Hours)

Audience Profile

This course is designed for software engineers responsible for building, managing, and deploying AI solutions that leverage Azure AI Foundry and other Azure AI services. Participants should be familiar with C# or Python, and have working knowledge of REST-based APIs, SDKs, and concepts in generative AI, computer vision, and language analysis.

Day 1 — Python Foundations + Azure Fundamentals

Python Setup & Basics

- Install Python on Windows
- Run first program
- Variables, Scope, Tokens, Operators, Comments

Data Types & Input

- Type Conversion, User Input, Numbers, Strings

Control Flow

- if, elif, else; Loops; break & continue

Functions

- Regular and Lambda functions

Collections

- Lists, Tuples, Dictionaries, Sets

OOP & Modules

- Classes, Objects, math, statistics, random

Advanced Topics

- DateTime, File Handling

Mini Project

Day 2 — Azure Architecture & Core Services

Azure Fundamentals

- Regions, Zones, Resource Groups
- Scalability, Reliability, Security, Cost Optimization
- Well-Architected Framework

Core Services

- Compute, Networking, Storage, Identity

Hands-On

- Deploy architecture: Web App + DB + Storage
- Configure RBAC, Networking

Case Study

- Global multi-tier architecture design

Day 3 — Generative AI Apps in Azure

- Model Catalog
- Azure AI Foundry SDK
- RAG solutions
- Fine-tuning
- Responsible AI

Labs:

- Deploy a model
- GenAI chat app
- RAG app
- Content filters
- Model evaluation

Day 4 — AI Agents on Azure

- Agent Service
- Custom Tools
- Multi-agent solutions
- MCP integration

- Microsoft Agent Framework

Labs included.

Day 5 — Natural Language + Vision Solutions

NLP:

- Text Analytics, QnA, CLU, NER
- Translation
- Speech services
- Audio-enabled GenAI

Vision:

- Image analysis
- OCR
- Face detection
- Classification
- Object detection
- Video analytics

Labs included.

Day 6 — Information Extraction + Capstone

- Content Understanding
- Document Intelligence
- Knowledge Mining

Labs included.

Capstone Project

Build end-to-end Azure AI solution integrating Generative AI, Agents, Vision/NLP, Document Intelligence, Azure Functions, Storage, RBAC.