



AZ – 204

Developing Solutions for Microsoft Azure

Overview

The AZ-204T00: Developing Solutions for Microsoft Azure course is designed for developers who want to learn how to create end-to-end solutions on the Microsoft Azure platform. This course covers essential Azure development skills, including creating, configuring, and deploying solutions using Azure services. Participants will also gain practical experience in implementing security, managing APIs, and developing applications that leverage Azure storage, compute, and messaging services.

Course Objectives

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

- Develop Azure compute solutions
- Develop for Azure storage
- Implement Azure security
- Monitor, troubleshoot, and optimize Azure solutions
- Connect to and consume Azure services and third-party services

Prerequisites

- At least one year of experience developing scalable solutions through all phases of software development.
- Have a base understanding of Azure and cloud concepts, services, and the Azure Portal.
- Much of the course focuses on C#, .NET Framework, HTML, and using REST in applications.
- Are familiar with PowerShell and/or Azure CLI.

Audience Profile

Students in this course are interested in Azure development or in passing the Microsoft Azure Developer Associate certification exam.

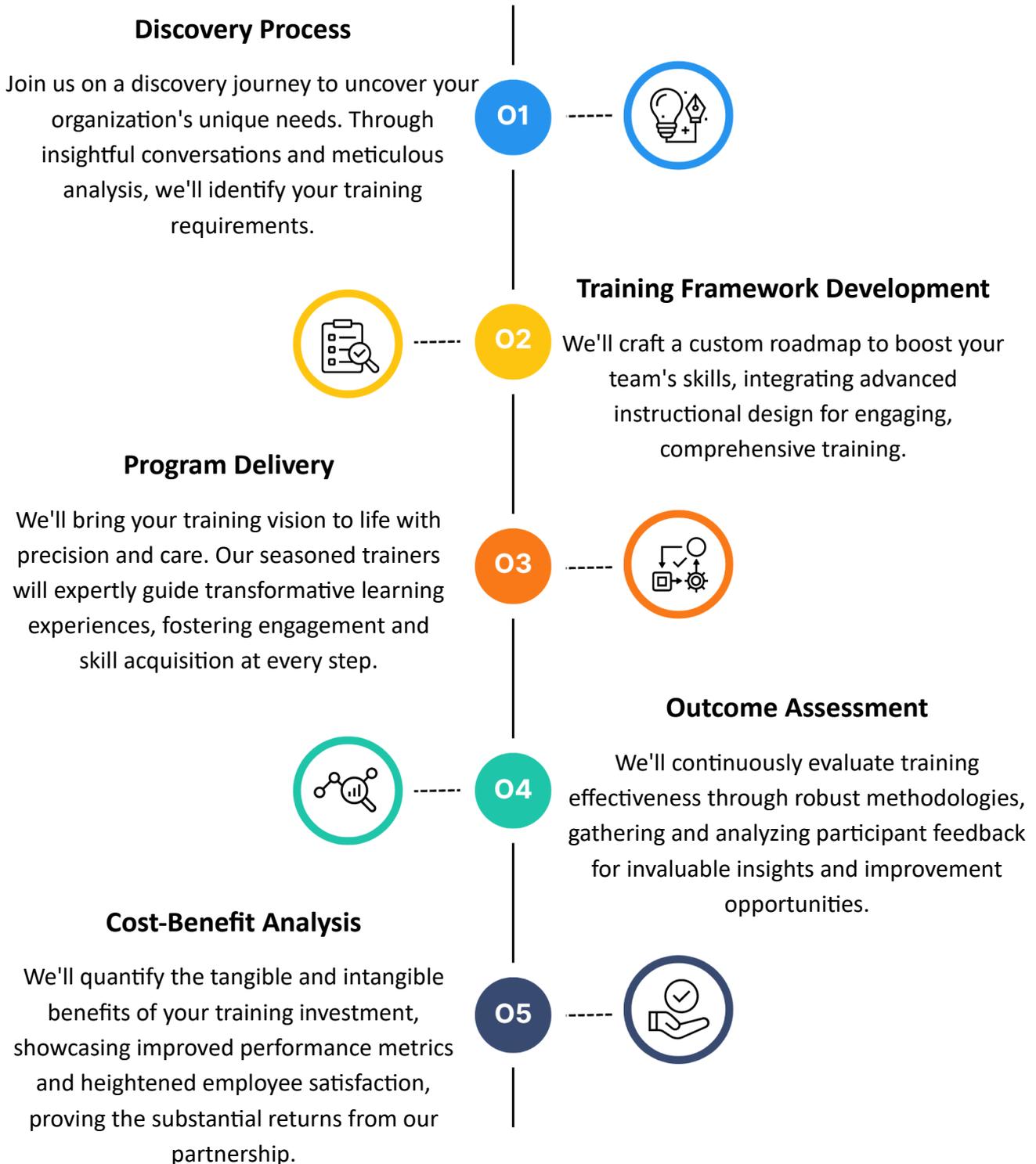
Course Level

- Intermediate

Course Duration

- 5 Days – 40 Hours

Creating Tailor - Made Training Programs to Meet Your **Specific Goals**



Course Outline

This course teaches developers how to create end-to-end solutions in Microsoft Azure. Students will learn how to implement Azure compute solutions, create Azure Functions, implement and manage web apps, develop solutions utilizing Azure storage, implement authentication and authorization, and secure their solutions by using KeyVault and Managed Identities. Students will also learn how to connect to and consume Azure services and third-party services, and include event- and message-based models in their solutions. The course also covers monitoring, troubleshooting, and optimizing Azure solutions.

Module 1: Implement Azure App Service web apps

- Lesson: Explore Azure App Service
- Lesson: Configure web app settings
- Lesson: Scale apps in Azure App Service
- Lesson: Explore Azure App Service deployment slots
- **Exercise:** Create a static HTML web app by using Azure Cloud Shell
- **Lab 01:** Build a web application on Azure platform as a service offerings

Module 2: Implement Azure Functions

- Lesson: Explore Azure Functions
- Lesson: Develop Azure Functions
- **Exercise:** Create an Azure Function by using Visual Studio Code
- **Lab 02:** Implement task processing logic by using Azure Functions

Module 3: Develop solutions that use Blob storage

- Lesson: Explore Azure Blob storage
- Lesson: Manage the Azure Blob storage lifecycle
- Lesson: Work with Azure Blob storage
- **Exercise:** Create Blob storage resources by using the .NET client library
- **Lab 03:** Retrieve Azure Storage resources and metadata by using the Azure Storage SDK for .NET

Module 4: Develop solutions that use Azure Cosmos DB

- Lesson: Explore Azure Cosmos DB
- Lesson: Work with Azure Cosmos DB
- Lesson: Create Azure Cosmos DB resources by using the Azure portal
- **Exercise:** Create resources by using the Microsoft .NET SDK v3
- **Lab 04:** Construct a polyglot data solution

Module 5: Implement containerized solutions

- Lesson: Manage container images in Azure Container Registry
- Lesson: Run container images in Azure Container Instances
- Lesson: Implement Azure Container Apps
- **Exercise:** Build and run a container image by using Azure Container Registry Tasks
- **Exercise:** Deploy a container instance by using the Azure CLI
- **Exercise:** Deploy a container app
- **Lab 05:** Deploy compute workloads by using images and containers

Module 6: Implement user authentication and authorization

- Lesson: Explore the Microsoft identity platform
- Lesson: Implement authentication by using the Microsoft Authentication Library
- Lesson: Implement shared access signatures
- Lesson: Explore Microsoft Graph
- **Exercise:** Implement interactive authentication by using MSAL.NET
- **Lab 06:** Authenticate by using OpenID Connect, MSAL, and .NET SDKs

Module 7: Implement secure cloud solutions

- Lesson: Implement Azure Key Vault
- Lesson: Implement managed identities
- Lesson: Implement Azure App Configuration
- **Exercise:** Set and retrieve a secret from Azure Key Vault by using Azure CLI
- **Lab 07:** Access resource secrets more securely across services

Module 8: Implement API Management

- Lesson: Explore API Management
- Lesson: Exercise: Create a backend API
- **Lab 08:** Create a multi-tier solution by using Azure services

Module 9: Develop event-based solutions

- Lesson: Explore Azure Event Grid
- Lesson: Explore Azure Event Hubs
- **Exercise:** Route custom events to web endpoint by using Azure CLI
- **Lab 09:** Publish and subscribe to Event Grid events

Module 10: Develop message-based solutions

- Lesson: Discover Azure message queues
- **Lab 10:** Asynchronously process messages by using Azure Service Bus Queues

Module 11: Troubleshoot solutions by using Application Insights

- Lesson: Monitor app performance
- **Lab 11:** Monitor services that are deployed to Azure

Module 12: Implement caching for solutions

- Lesson: Develop for Azure Cache for Redis
- Lesson: Develop for storage on CDNs
- **Exercise:** Connect an app to Azure Cache for Redis by using .NET Core
- **Lab 12:** Enhance a web application by using the Azure Content Delivery Network

Indus Tech Services

Who We Are....

Indus Tech Services is an IT company that specializes in providing comprehensive training, consulting & implementation services for software solutions designed to address the diverse business challenges faced by organizations today. With a passion for technology and a deep understanding of business processes, Indus Tech is committed to empowering businesses to optimize their operations, boost productivity, and drive sustainable growth.

Indus Tech Services and Microsoft Partnership

As a proud **Microsoft Partner**, **Indus Tech Services** is uniquely equipped to deliver top-tier training and certification programs designed to meet the evolving needs of today's workforce. Our partnership with Microsoft allows us to offer direct access to the latest tools, resources, and industry insights, ensuring that our courses are aligned with the most current technology trends. This collaboration enables us to provide unparalleled support to our students, helping them gain the skills and knowledge required to excel in their careers. By choosing Indus Tech Services, you're not just learning; you're gaining a competitive edge with Microsoft-backed expertise and certification.

Why Choose Us...

From time to time, life serves up a profound nudge, urging us to step beyond our routines and make a difference in the world. Indus Tech Services emerged from one such compelling wake-up call. We are not just a company; we are a dedicated force with a belief in providing solutions to organizations, regardless of their size, and we infuse a human touch into everything we do.

Our Expertise

With over 25 years of collective experience navigating the intricacies of daily business transactions, irrespective of geographical, cultural, time zone, or language barriers, our team has honed their expertise to meet any challenge head-on. This wealth of experience has armed our resources with an unparalleled understanding and skill set to tackle a broad spectrum of obstacles.

Training

With two decades of unwavering commitment and a global footprint, our company is a true pioneer in the fields of linguistic, transactional, technical, and behavioural training for some of the world's largest corporate entities. Our unparalleled expertise has been refined through years of dedication and innovation, making us the go-to choice for businesses seeking transformative training solutions.

Consulting

Our company has been at the forefront of providing world-class IT consulting services to organizations spanning the globe. With an extensive and proven track record, we have honed our expertise to meet the ever-evolving technological needs and challenges faced by businesses, regardless of their scale or industry.

Implementation

Our experience covers a broad spectrum of IT implementation services, including system integration, software deployment, network architecture, cloud migration, and infrastructure setup. We understand that the successful execution of IT projects is pivotal to an organization's growth and efficiency. Therefore, we bring a depth of knowledge and a commitment to delivering results that set us apart.

To know more contact us at info@industechservices.com or call us at +91 - 99961 61170.