

# AZ-204T00: Developing Solutions for Microsoft Azure

Class Length: 5 Days

## Overview

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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.

## Prerequisite Comments

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Students should have 1-2 years professional development experience and experience with Microsoft Azure. They must be able to program in an Azure Supported Language.

## Target Audience

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

## Course Outline

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### 1 - Creating Azure App Service Web Apps

Azure App Service core concepts  
Creating an Azure App Service Web App  
Configuring and Monitoring App Service apps  
Scaling App Service apps  
Azure App Service staging environments

### 2 - Implement Azure functions

Azure Functions overview  
Developing Azure Functions  
Implement Durable Functions

### 3 - Develop solutions that use blob storage

Azure Blob storage core concepts  
Managing the Azure Blob storage lifecycle  
Working with Azure Blob storage

### 4 - Develop solutions that use Cosmos DB storage

Azure Cosmos DB overview  
Azure Cosmos DB data structure  
Working with Azure Cosmos DB resources and data

## 5 - Implement IaaS solutions

Provisioning VMs in Azure  
Create and deploy ARM templates  
Create container images for solutions  
Publish a container image to Azure Container Registry  
Create and run container images in Azure Container Instances

## 6 - Implement user authentication and authorization

Microsoft Identity Platform v2.0  
Authentication using the Microsoft Authentication Library  
Using Microsoft Graph  
Authorizing data operations in Azure Storage

## 7 - Implement secure cloud solutions

Manage keys, secrets, and certificates by using the KeyVault API  
Implement Managed Identities for Azure resources  
Secure app configuration data by using Azure App Configuration

## 8 - Implement API Management

API Management overview  
Defining policies for APIs  
Securing your APIs

## 9 - Develop App Service Logic Apps

Azure Logic Apps overview  
Creating custom connectors for Logic Apps

## 10 - Develop event-based solutions

Implement solutions that use Azure Event Grid  
Implement solutions that use Azure Event Hubs  
Implement solutions that use Azure Notification Hubs

## 11 - Develop message-based solutions

Implement solutions that use Azure Service Bus  
Implement solutions that use Azure Queue Storage queues

## 12 - Monitor and optimize Azure solutions

Overview of monitoring in Azure  
Instrument an app for monitoring  
Analyzing and troubleshooting apps  
Implement code that handles transient faults

### 13 - Integrate caching and content delivery within solutions

Develop for Azure Cache for Redis  
Develop for storage on CDNs

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