

## **AZ-201: Azure Developer, Advanced Solutions**

### **Overview**

This course is designed for developers who already know how to code in at least one of the Azure-supported languages.

### **At Course Completion**

After completing this course, students will be able to:

Learn to develop for asynchronous processing and how to implement the appropriate asynchronous compute model.

Implement autoscaling in your solution and implement code that addresses transient state.

Discover how to implement large-scale, parallel and high-performance apps by using batches.

Learn to implement, and manage, distributed transactions.

Configure instrumentation in an app or service by using Application Insights and other tools.

Manage APIs by using API Management (APIM)

Create an APIM instance, configure authentication for APIs, create an API gateway, and define policies for APIs

Configure a message-based integration architecture by using the services included in Azure.

Configure an app or service to send email

Develop an application message model including message schema and message exchange.

Create an event model, topics, and subscriptions

Learn to develop solutions using Computer Vision.

Use speech services and natural language processing in your app.

Create and manage dictionaries for FAQ generation by using QnA maker.

Leverage Bing Search in your application.

Create and register simple bot using the Bot Framework, and manage a bot using the Azure Portal.

Configure Azure Time Series Insights for your IoT solution.

Configure the Stream Analytics Service for inputs and outputs for your IoT device.

### **Course Outline**

#### **AZ-201T01: Develop for an Azure Cloud Model**

Module 1: Develop for asynchronous processing

Lessons

Implement parallelism multithreading and processing

Implement Azure Functions and Azure Logic Apps

Implement interfaces for storage or data access

Implement appropriate asynchronous computing models

Module 2: Develop for autoscaling

Lessons

Implement autoscaling rules and patterns

Implement code that addresses singleton application instances

Implement code that addresses a transient state

Module 3: Develop long-running tasks

Lessons

Implement large scale parallel and high-performance apps by using batches

Implement resilient apps by using queues

Implement code to address application events by using webhooks

Address continuous processing tasks by using Azure WebJobs

Module 4: Implement distributed transactions

Lessons

Identify tools to implement distributed transactions

Manage the transaction scope

Manage transactions across multiple databases and servers

Module 5: Enable the search of textual content

Lessons

Create an Azure Search index

Import searchable data

Query the Azure Search index by using code

Module 6: Instrument an app or service and implement logging  
Lessons  
Configure instrumentation in an app or service  
Configure the logging service

### **AZ-201T02: Implement Azure Development Integration Solutions**

Module 1: Manage APIs by using API Management  
Lessons  
Analyze recommendations in Security Center  
Create an API Management instance  
Configure authentication for APIs  
Create an API gateway  
Define policies for APIs

Module 2: Configure a message-based integration architecture  
Lessons  
Configure an app or service to send emails  
Configure an event publish and subscribe model  
Configure the Azure Relay service  
Create and configure a notification hub  
Create and configure an event hub  
Create and configure a service bus  
Configure an app or service with Microsoft Graph

Module 3: Develop an application message model  
Lessons  
Create an event model  
Create topics and subscriptions

### **AZ-201T03 : Develop Azure Cognitive Services, Bot, and IOT Solutions**

Module 1: Develop Azure Cognitive Services solutions  
Lessons  
Cognitive Services overview  
Develop solutions using Computer Vision  
Develop solutions using Bing Web Search  
Develop solutions using Custom Speech Service  
Develop solutions using QnA Maker

Module 2: Create and integrate bots  
Lessons  
Azure Bot Service overview  
Create a bot using the Bot Builder SDK for .NET  
Using Language Understanding in your bot  
Register a bot with Bot Service  
Managing a bot using the Azure Portal

Module 3: Create and implement IoT solutions  
Lessons  
Working with the Azure IoT Hub  
Working with Azure Time Series Insights  
Working with Azure Stream Analytics