Module Title	:	AZ-201T03-A: Develop Azure Cognitive Services, Bot, and IoT Solutions
Duration	:	**2 days**

Overview

This course is part of a series of four courses to help you prepare for Microsoft's Azure Developer certification exam AZ-201: Develop Advanced Microsoft Azure Cloud Solutions. These courses are designed for developers who already know how to code in at least one of the Azure-supported languages.

The coursework covers how to integrate Azure Cognitive Services, like Computer Vision, QnA Maker, and natural language processing in your solution. You'll also learn how to create and manage bots using the Bot Framework and Azure portal. The course also covers leveraging Azure Time Series Insights, Stream Analytics and the IoT Hub for your IoT solution.

Audience profile

These courses are for experienced programmers who want to develop and host solutions in Azure. Learners should have some experience with Azure and must be able to program in at least one Azure-supported language. These course focus on C#, Node.js, Azure CLI, Azure PowerShell, and JavaScript.

At course completion

After completing this course, students will be able to:

- 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.
- Register your device with the IoT Hub Device Provisioning Service.

Course Outline

Module 1: Develop Azure Cognitive Services solutions

Lessons

- Cognitive Services overview

- Develop solutions using Computer Vision
- Develop solutins using Bing Web Search
- Develop solutions using Custom Speech Service
- Develop solutions using QnA Maker

After completing this module, students will be able to:

- 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.

Module 2: Create and intergrate 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

After completing this module, students will be able to:

- Leverage Bing Search in your application.
- Create and register simple bot using the Bot Framework, and manage 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

After completing this module, students will be able to:

- Configure Azure Time Series Insights for your IoT solution.
- Configure the Stream Analytics Service for inputs and outputs for your IoT device
- Register your device with the IoT Hub Device Provisioning Service