

## **BUILDING APPLICATIONS AND SOLUTIONS WITH MICROSOFT 365 CORE (SERVICES Course (MS-600**

دوره ساخت برنامه‌ها و راه‌حل‌ها با خدمات اصلی Microsoft 365 برای افرادی طراحی شده است که به نقش توسعه‌دهنده برنامه‌های Microsoft Teams علاقه‌مند هستند.

### **مروری بر دوره**

در این دوره، دانشجویان یاد خواهند گرفت چگونه راه‌حل‌های همکاری را با بهره‌گیری از 4 عنصر اصلی پلتفرم Microsoft 365 ایجاد کنند: پیاده‌سازی هویت Microsoft، کار با Microsoft Graph، و ساخت برنامه‌ها برای Microsoft Teams. در بخش "پیاده‌سازی هویت Microsoft"، دانشجویان یاد خواهند گرفت که چگونه Microsoft identity را پیاده‌سازی کنند، از ثبت یک برنامه، پیاده‌سازی احراز هویت، پیکربندی مجوزها برای مصرف یک API، و ایجاد یک سرویس برای دسترسی به Microsoft Graph استفاده کنند. در بخش "کار با Microsoft Graph"، دانشجویان یاد خواهند گرفت چگونه به داده‌های کاربر دسترسی پیدا کنند، پارامترهای پرس‌وجو را بررسی کنند، چرخه عمر یک گروه را مدیریت کنند، به فایل‌ها دسترسی یابند، و با استفاده از Microsoft Graph ترافیک شبکه را بهینه‌سازی کنند. در بخش "ساخت برنامه‌ها برای Microsoft Teams"، دانشجویان به اجزای یک اپلیکیشن Teams نگاه خواهند کرد، با وب‌هوک‌ها، تب‌ها، ربات‌های مکالمه‌ای و قابلیت‌های دیگر برنامه‌های Microsoft Teams کار خواهند کرد. همچنین یاد خواهند گرفت چگونه برنامه‌های Microsoft Teams را پیاده‌سازی کنند.

### **آنچه خواهید آموخت**

- Getting Started with Microsoft Identity
- Application types in Microsoft identity
- Permissions and Consent Framework
- Secure custom APIs with Microsoft Identity
- Work with users, groups, and roles in custom apps and APIs
- Optimize data usage when using Microsoft Graph with query parameters
- Optimize network traffic with Microsoft Graph
- Access User Data from Microsoft Graph
- Manage Group Lifecycle with Microsoft Graph
- Access Files with Microsoft Graph
- Use Change Notifications and Track Changes with Microsoft Graph
- Introduction to building apps for Microsoft Teams
- Task-oriented interactions in Microsoft Teams with messaging extensions
- Create embedded web experiences with tabs for Microsoft Teams
- Create interactive conversational bots for Microsoft Teams
- Collect Input in Microsoft Teams with Task Modules
- Connect web services to Microsoft Teams with webhooks and Office 365 Connectors

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- Microsoft Teams – Use the teamwork Microsoft Graph endpoint
- Microsoft Teams – Authentication and Single Sign-on
- Create interactive meeting apps for Microsoft Teams
- Distribute your Microsoft Teams app

## سرفصل ها

### **Module 1: Getting Started with Microsoft Identity**

- Explain the different types of tokens used in Microsoft Identity solutions
- Compare and contrast the different account types
- Compare and contrast the supported Microsoft Identity Topologies

### **Module 2: Application types in Microsoft identity**

- Compare and contrast different grant types (flows) in the OAuth 2.0 protocol
- Evaluate which authentication protocol to use based on the app scenario
- Implement different authentication protocols in different application types

### **Module 3: Permissions and Consent Framework**

- Compare and contrast different permission types supported by the Microsoft identity platform
- Compare and contrast the difference between static and dynamic consent in user permissions
- Create an app that implements dynamic consent for incrementally obtaining permissions as needed from users

### **Module 4: Secure custom APIs with Microsoft Identity**

- Create a custom web API that is secured with Microsoft identity
- Create a custom web app that calls a custom web API secured with Microsoft identity
- Create a custom daemon app that calls a custom web API secured with Microsoft identity

### **Module 5: Work with users, groups, and roles in custom apps and APIs**

- Create a custom ASP.NET web app that is secured with Microsoft identity
- Demonstrate how to obtain security groups as a claim in the token and use them in the app
- Demonstrate how to use app roles to grant users access to an app

### **Module 6: Optimize data usage when using Microsoft Graph with query parameters**

- Demonstrate how to manipulate REST queries with query parameters

- Create queries that expand complex entities
- Demonstrate how to search for content with Microsoft Graph
- Optimize Microsoft Graph queries with batching

#### **Module 7: Optimize network traffic with Microsoft Graph**

- Explain how Microsoft Graph maintains resource health
- Identify when Microsoft Graph throttles requests
- Decide the appropriate pattern to address throttled requests
- Create queries that mitigate throttling scenarios

#### **Module 8: Access User Data from Microsoft Graph**

- Demonstrate how to get a list of users
- Demonstrate how to get details, including a profile picture, of a user
- Demonstrate how to manage the lifecycle of a user from creation to deletion

#### **Module 9: Manage Group Lifecycle with Microsoft Graph**

- Demonstrate how to get information about a group
- Demonstrate how to get information about a user's groups
- Demonstrate how to manage the lifecycle of a group

#### **Module 10: Access Files with Microsoft Graph**

- Demonstrate how to retrieve a list of files OneDrive
- Demonstrate to download a file from OneDrive using a unique ID
- Get a list of files trending around the signed in user
- Demonstrate how to upload a large file to OneDrive

#### **Module 11: Use Change Notifications and Track Changes with Microsoft Graph**

- Demonstrate how to use the Microsoft Graph .NET SDK
- Demonstrate how to subscribe and receive notifications when entities change with Microsoft Graph
- Demonstrate how to retrieve a list of all entities that have changed using delta query

#### **Module 12: Introduction to building apps for Microsoft Teams**

- Describe the components of a Microsoft Teams app
- List the options for distributing a Microsoft Teams app

- List the extensibility points available in Microsoft Teams
- Choose the correct extensibility point(s) based on your scenario

### **Module 13: Task-oriented interactions in Microsoft Teams with messaging extensions**

- Demonstrate how to create an action-based messaging extension for Microsoft Teams
- Demonstrate how to create search-based messaging extension for Microsoft Teams
- Demonstrate how to unfurl a URL with messaging extension for Microsoft Teams

### **Module 14: Create embedded web experiences with tabs for Microsoft Teams**

- .Evaluate the differences between personal and channel/group tabs
- .Create a channel/group tab with a configuration experience
- .Create a tab that uses authentication to call a protected REST API

### **Module 15: Create interactive conversational bots for Microsoft Teams**

- Demonstrate how to create a conversation bot for Microsoft Teams
- Demonstrate how to subscribe to and respond to events in a conversation bot in Microsoft Teams
- Demonstrate how to incorporate authentication in a conversation bot in Microsoft Teams

### **Module 16: Collect Input in Microsoft Teams with Task Modules**

- Create a task module for a tab
- Demonstrate how to create a task module that includes an adaptive card
- Create a task module for a bot

### **Module 17: Connect web services to Microsoft Teams with webhooks and Office 365 Connectors**

- Demonstrate how to create and use an outgoing webhook for a Microsoft Teams channel
- Demonstrate how to create and use an incoming webhook for a Microsoft Teams channel
- Demonstrate how to create, register, and use an Office 365 Connector for Microsoft Teams

### **Module 18: Microsoft Teams – Use the teamwork Microsoft Graph endpoint**

- Understand how to use Microsoft Graph to communicate with Microsoft Teams
- Demonstrate how to get a list of all teams and a specific team with Microsoft Graph
- Demonstrate how to configure build-in tabs within a Microsoft Teams team with Microsoft Graph
- Demonstrate how to send a notification to a user or a channel using the Microsoft Teams activity feed with Microsoft Graph

### **Module 19: Microsoft Teams – Authentication and Single Sign-on**

- Understand the authentication options available to developers creating custom Microsoft Teams tabs and bots
- Create a Microsoft Teams tab that uses SSO authentication
- Create a bot for Microsoft Teams that uses SSO authentication

### **Module 20: Create interactive meeting apps for Microsoft Teams**

- Understand the capabilities of Microsoft Teams meetings extensibility feature
- Create a Microsoft Teams meetings app that meeting attendees can use before and during a meeting
- Implement a summary view of the meeting after the meeting has concluded

### **Module 21: Distribute your Microsoft Teams app**

- Manage app definitions and packages in the Developer Portal for Teams
- Upload a custom app to a single user or team
- Upload an app to the App Catalog for your organization
- Automate deployment of Microsoft Teams apps

## **مخاطبان دوره**

این دوره برای علاقمندان به پلتفرم توسعه Microsoft 365 یا افرادی که قصد دارند در آزمون Microsoft Teams Application Developer Associate certification شرکت کنند. دانشجویان همچنین باید 1 تا 2 سال تجربه به عنوان توسعه دهنده داشته باشند. در این دوره فرض می شود که دانشجویان توانایی کدزنی را دارند و دارای یک درک ابتدایی از REST APIs، JSON، OAuth2، OData، OpenID Connect، هویتهای Microsoft، Azure AD B2C و حسابهای Microsoft، Azure AD B2C، و مفاهیم مجوز/اجازه هستند.

## **پیش نیازها**

– دانشجویان باید تجربه 1 تا 2 ساله به عنوان یک توسعه دهنده را داشته باشند. در این دوره فرض می شود که دانشجویان توانایی کدنویسی را دارند و دارای یک درک ابتدایی از REST APIs، JSON، OAuth2، OData، OpenID Connect، هویتهای Microsoft، Azure AD B2C و حسابهای Microsoft، Azure AD B2C، و مفاهیم مجوز/اجازه هستند. – توصیه می شود که دانشجویان تجربه ای در توسعه راه حل ها بر روی Microsoft Teams از طریق تمام مراحل توسعه نرم افزار داشته باشند.

## **مدارک مرتبط**

Exam MS-600: Building Applications and Solutions with Microsoft 365 Core Services

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