

# Course 20482C: Advanced Windows® Store App Development Using HTML5 and JavaScript

**Five Days, Instructor-Led**

## About this course

This course will teach you advanced programming practices and techniques that will help you develop Windows Store apps. In this course, you will learn how design and develop Windows Store apps, as well as implement advanced features, such as using location information, streaming media to external devices, and integrating with online services. You will also learn how to use Microsoft Visual Studio 2013 and Expression Blend tools.

This course maps to the 70-482 exam.

Windows Azure is required or used as part of the lab for this course, which may not be available in all countries. Please check with your Microsoft training provider that this cloud service is available in your area. Training Providers please reference the course setup guide for more details.

## Audience profile

This course is intended for professional developers who have one or more years of experience creating Applications for a production environment and who are comfortable programming in HTML5, JavaScript and CSS to create Windows Store apps.

## At course completion

After completing this course, students will be able to:

- Add animations and transitions in a Windows Store app to improve the user experience.
- Localize the Windows Store app UI.
- Brand the Windows Store app and improve the loading experience with a splash screen.
- Use various storage mechanisms, choose a suitable caching strategy for their Windows Store app, and use advanced file access methods.
- Create custom controls, extend templated controls, and create and consume WinMD components.
- Implement the Print and Settings contracts and the Play To API.
- Work with the Push Notification Service (WNS).
- Capture media with the camera and microphone.
- Create and consume background tasks.
- Discover device capabilities, interact with devices, and act upon sensor data.
- Implement Windows Store trial licensing and in-app purchasing and advertising.
- Understand how to manage Windows authentication and web authentication in Windows Store apps.
- Diagnose problems and monitor application behavior by using tracing and profiling tools and APIs.

## Pre-requisites

Before attending this course, students must have:

- 6 to 12 months experience programming in HTML5.
- 3 to 6 months experience using Visual Studio 2013 (including experience in using preview builds).
- Minimum one month of experience working on Windows Store apps.

*This course is intended for professional developers who have 1 or more years of experience creating applications for a production environment.*

## Course Outline

### Module 1: Creating Reusable Controls and Components

This module explains how to create custom controls, extend templated controls, and create and consume WinMD components.

#### Lessons

- Creating Custom Controls
- Extending Existing Controls
- Consuming WinMD Components

#### Lab : Creating Reusable Controls and Components

- Create and Use a Custom Control
- Consume a WinMD Component

After completing this module, students will be able to:

- Create reusable custom controls.
- Create and extend templated controls.
- Consume a WinMD component.

### Module 2: Implementing Advanced Contract Scenarios

This module explains how to implement the Print and Settings contracts and the Play To API.

#### Lessons

- The Print Contract
- The Play To Contract

#### Lab : Printing

- Print a single page
- Print multiple pages

After completing this module, students will be able to:

- Print by using the print contract.
- Describe the Play To API.

### Module 3: The Windows Push Notification Service (WNS)

This module explains how to work with the Push Notification Service (WNS).

#### Lessons

- The Push Notification Service (WNS)
- Communicating with the Push Notification Service (WNS)

#### Lab : The Windows Push Notification Service (WNS)

- Manage a Windows Notification Service (WNS) Channel

After completing this module, students will be able to:

- Describe the Push Notification Service (WNS).
- Work with push notifications.

## Module 4: Windows Store App Essentials

This module describes the essential Windows Store app features.

### Lessons

- Review Windows Store App Essentials
- Review Windows Store App Essentials - Under the Hood

After completing this module, students will be able to:

- Describe basic Windows Store app concepts related to the app presentation.
- Describe basic Windows Store app concepts related to integration with the Windows 8 ecosystem.

## Module 5: Implementing Animations and Transitions

This module explains how to add animations and transitions to improve the user experience by using JavaScript APIs and CSS.

### Lessons

- Using Animation
- Working with Transitions and Transformations

### Lab : Implementing Animations and Transitions

- Creating Animations in a Windows Store App
- Creating Transitions and Transformations in a Windows Store App

After completing this module, students will be able to:

- Describe the built-in WinJS animation library and CSS animations.
- Apply transitions and transformations.

## Module 6: Implementing Globalization and Localization

This module explains how to localize the Windows Store application User Interface.

### Lessons

- Working with Resource Files
- Implementing Culture-Specific Formatting

### Lab : Implementing Globalization and Localization

- Create and Consume Resource Files
- Apply Culture-Specific Formatting

After completing this module, students will be able to:

- Create and consume localized resources.
- Apply language-specific formatting for a multi-lingual application.

## Module 7: Branding and a Seamless User Interface

This module explains how to brand Windows Store app and improve the loading experience with a splash screen.

### Lessons

- Customizing the Splash Screen
- Branding the User Interface

### Lab : Branding and Seamless User Interface

- Create a Customized Splash Screen
- Branding a Windows Store App

After completing this module, students will be able to:

- Create and present a splash screen.
- Differentiate Windows Store apps by branding.

## Module 8: Advanced Data Scenarios in a Windows Store App

This module explains how to use various storage mechanisms, choose a suitable caching strategy for a Windows Store app, and use advanced file access methods.

#### Lessons

- Windows Store App Storage Options
- Implementing Data Caching
- Advanced File Functionality

#### Lab : Caching Data

- Cache Data

After completing this module, students will be able to:

- Describe the storage mechanisms available to Windows Store apps.
- Describe caching strategies.
- Describe advanced file access options.

### Module 9: Capturing Media

This module explains how to capture media with the camera and microphone.

#### Lessons

- Using CameraCaptureUI to Capture Pictures, Videos or Audio
- Using MediaCapture to Capture Pictures, Video, or Audio

#### Lab : Capturing Media

- Capture video using the CameraCaptureUI API
- Capture image using the MediaCapture API

After completing this module, students will be able to:

- Use the CameraCaptureUI API.
- Use the MediaCapture API.

### Module 10: Background Tasks

This module explains how to create and consume background tasks.

#### Lessons

- Creating Background Tasks
- Consuming Background Tasks in a Windows Store App

#### Lab : Background Tasks

- Create and Consume a Background Task
- Consume background tasks.

After completing this module, students will be able to:

- Create background tasks.
- Consume background tasks.

### Module 11: Working with Sensors and Devices

This module explains how to discover device capabilities, interact with devices, and act upon sensor data.

#### Lessons

- Working with Sensors
- Working with Devices

#### Lab : Working with Sensors and Devices

- Use the orientation sensor
- Use location services

After completing this module, students will be able to:

- Discover sensors, test their availability, and handle sensor events.
- Discover device availability, enumerate devices and their capabilities and properties, and use them.

### Module 12: Generating Revenue with your App

This module explains how implement trial licensing and in-app purchasing and advertising.

#### Lessons

- Implementing Trial Functionality in a Windows Store App
- Implement In-App Purchases

- Advertising in a Windows Store App

**Lab : Generating Revenue with your App**

- Use Windows.Store Classes to Support Trial App Conversion
- Implement In-App Purchasing in an App

After completing this module, students will be able to:

- Implement trial functionality and transition to a full license.
- Implement in-app purchases.
- Implement advertising functionality.

**Module 13: Securing Windows Store App Data**

This module explains how to manage Windows authentication and web authentication in Windows Store apps.

**Lessons**

- Managing Windows Authentication
- Managing Web Authentication
- Encryption in Windows Store Apps

**Lab : Securing Windows Store App Data**

- Encrypt User Information

**Course Inclusions:**

- Microsoft Official Curriculum (MOC) and/or Wizards Learning Courseware (WLC)
- Microsoft Certified Trainer (MCT)
- Lunch, AM and PM Snacks
- Certificate of Achievement
- Course Note

- Use ACS Authentication

After completing this module, students will be able to:

- Authenticate using Windows Live Authentication.
- Authenticate using web authentication protocols.
- Encrypt data.

**Module 14: Tracing and Profiling Windows Store Apps**

This module explains how to diagnose problems and monitor Windows Store app behavior by using tracing and profiling tools and APIs.

**Lessons**

- Tracing a Windows Store App
- Profiling a Windows Store App

After completing this module, students will be able to:

- Trace a Windows Store app.
- Profile a Windows Store app.