

## Course Details

# Course 20480A

## Programming in HTML5 with JavaScript and CSS3

Length: 5 Days

Published: January 14, 2013

Language(s): English

Audience(s): Partners, Small Business, Home PC Users,  
Information Workers, IT Professionals,  
Developers.

Level: 200

Technology: Microsoft Visual Studio 2012

Type: Course

Delivery Method: Instructor-led (classroom)

## Prerequisites

Before attending this course, students must have at least three months professional development experience.

In addition to their professional experience, students who attend this training should have a combination of practical and conceptual knowledge related to HTML5 programming. This includes the following prerequisites:

Understand the basic HTML document structure:

- Use HTML tags to display text content.
- Use HTML tags to display graphics.
- Use HTML APIs.

Understand how to style common HTML elements using CSS, including:

- Separating presentation from content.
- Managing content flow.
- Managing positioning of individual elements.
- Managing content overflow.
- Basic CSS styling.

## Course Outline

### Module 1: Overview of HTML and CSS

- Overview of HTML
- Overview of CSS
- Creating a Web Application by Using Visual Studio 2012

### Module 2: Creating and Styling HTML5 Pages

- Creating an HTML5 Page
- Styling an HTML5 Page

### Module 3: Introduction to JavaScript

- Overview of JavaScript Syntax
- Programming the HTML DOM with JavaScript
- Introduction to jQuery

### Module 5: Communicating with a Remote Data Source

- Sending and Receiving Data by Using XMLHttpRequest
- Sending and Receiving Data by Using jQuery AJAX operations

### Module 7: Creating Objects and Methods by Using JavaScript

- Writing Well-Structured JavaScript
- Creating Custom Objects
- Extending Objects

### Module 9: Adding Offline Support to Web Applications

- Reading and Writing Data Locally
- Adding Offline Support by Using the Application Cache

### Module 11: Creating Advanced Graphics

- Creating Interactive Graphics by Using Scalable Vector Graphics
- Programmatically Drawing Graphics by Using a Canvas

### Module 13: Implementing Real-Time Communications by Using Web Sockets

- Introduction to Web Sockets
- Sending and Receiving Data by Using Web Sockets

### Module 4: Creating Forms to Collect Data and Validate User Input

- Overview of Forms and Input Types
- Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript

### Module 6: Styling HTML5 by Using CSS3

- Styling Text
- Styling Block Elements
- CSS3 Selectors
- Enhancing Graphical Effects by Using CSS3

### Module 8: Creating Interactive Pages using HTML5 APIs

- Interacting with Files
- Incorporating Multimedia
- Reacting to Browser Location and Context
- Debugging and Profiling a Web Application

### Module 10: Implementing an Adaptive User Interface

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface

### Module 12: Animating the User Interface

- Applying CSS Transitions
- Transforming Elements
- Applying CSS Key-frame Animations

### Module 14: Creating a Web Worker Process

- Introduction to Web Workers
- Performing Asynchronous Processing by Using a Web Worker