

## Programming in HTML5 with JavaScript and CSS3 (20480)

### **Outline: Programming in HTML5 with JavaScript and CSS3 (20480)**

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

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

#### **Module 6: Styling HTML5 by Using CSS3**

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

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

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

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

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

### **Module 10: Implementing an Adaptive User Interface**

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface

### **Module 11: Creating Advanced Graphics**

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

### **Module 12: Animating the User Interface**

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

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

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

### **Module 14: Creating a Web Worker Process**

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