Training: Microsoft
MS-55320 Programming with HTML, CSS, and JavaScript

Microsoft Partner

TRAINING GOALS:

This five-day instructor-led is intended for IT professionals interested in becoming client-side web developers. who need to get a jump start on all three technologies. The course includes more than 30 exercises, providing a rapid hands-on introduction to the three major client-side languages: HTML, CSS, and JavaScript. Students should be prepared to cover a lot of ground quickly.

This course covers the same technologies as the retired Course 20480-C: Programming in HTML5 with JavaScript and CSS3. Like that course, this course focuses on using HTML, CSS, and JavaScript to develop web pages, implement programming logic, define and use variables, perform looping and branching, capture and validate user input, store data, and create well-structured applications. However, this course does not cover the HTML5 APIs covered in 20480.

Students can take this course on any computer with a web browser. Although it’s not required, we recommend Visual Studio Code as the editor.

Audience Profile

This course is intended for students new to computer programming or experienced programmers who are new to client-side web development.

At Course Completion

- Describe the technologies involved in web development.
- Create HTML pages with links and images.
- Explain the benefits of CSS.
- Style HTML pages with CSS.
- Explain the concepts of objects, methods, and properties.
- Work with JavaScript variables.
- Create their own custom functions in JavaScript.
- Write flow control logic in JavaScript.
- Write JavaScript code that listens for and handles events, such as mouse clicks and page loads.
- Create forms with HTML and validate them with JavaScript.
- Use regular expressions in JavaScript for advanced form validation.

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CONSPECT:

- A Quick Overview of Web Development
  - HTML is Part of a Team
  - Client-side Programming
  - Server-side Programming
  - Web Development Technologies
- Introduction to HTML
  - Exercise: A Simple HTML Document
  - Getting Started with a Simple HTML Document
  - HTML Elements, Attributes, and Comments
  - The HTML Skeleton
  - Viewing the Page Source
  - Special Characters
  - HTML Elements and Special Characters
  - History of HTML
  - The lang Attribute
  - Lab: Getting Started
  - A Simple HTML Document
- Paragraphs, Headings, and Text
  - Paragraphs
  - Heading Levels
  - Breaks and Horizontal Rules
  - Exercise: Paragraphs, Headings, and Text
  - The div Tag
  - Creating an HTML Page
  - Quoted Text
  - Preformatted Text
  - Inline Semantic Elements
  - Exercise: Adding Inline Elements
  - Lab: Exercises included throughout lesson
- HTML Links
  - Links Introduction
  - Text Links
  - Absolute vs. Relative Paths
  - Targeting New Tabs

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- Email Links
- Exercise: Adding Links
- Lorem Ipsum
- The title Attribute
- Linking to a Specific Location on the Page
- Targeting a Specific Location on the Page
- Lab: Exercises included throughout lesson

- HTML Images
  - Inserting Images
  - Image Links
  - Adding Images to the Document
  - Exercise: Adding Images to the Page
  - Providing Alternative Images
  - Lab: Exercises included throughout lesson
- HTML Lists
  - Unordered Lists
  - Ordered Lists
  - Definition Lists
  - Exercise: Creating Lists
  - Lab : Exercises included throughout lesson
- Crash Course in CSS
  - Benefits of Cascading Style Sheets
  - CSS Rules
  - Selectors
  - Combinators
  - Precedence of Selectors
  - How Browsers Style Pages
  - CSS Resets
  - CSS Normalizers
  - External Stylesheets, Embedded Stylesheets, and Inline Styles
  - Exercise: Creating an External Stylesheet
  - Exercise: Creating an Embedded Stylesheet
  - Exercise: Adding Inline Styles
  - div and span
  - Exercise: Styling div and span
  - Media Types

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- Units of Measurement
- Inheritance
- Lab: Exercises included throughout lesson

- CSS Fonts
  - font-family
  - @font-face
  - font-size
  - font-style
  - font-variant
  - font-weight
  - line-height
  - font shorthand
  - Exercise: Styling Fonts
  - Lab: Exercises included throughout lesson
- Color and Opacity
  - About Color and Opacity
  - Color and Opacity Values
  - color
  - opacity
  - Exercise: Adding Color and Opacity to Text
  - Lab : Exercises included throughout lesson
  - CSS Text
  - letter-spacing
  - text-align
  - text-decoration
  - text-indent
  - text-shadow
  - text-transform
  - white-space
  - word-break
  - word-spacing
  - Exercise: Text Properties
  - Lab : Exercises included throughout lesson
- JavaScript Basics
  - JavaScript vs. EcmaScript
  - The HTML DOM

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- JavaScript Syntax
- Accessing Elements
- Where Is JavaScript Code Written?
- JavaScript Objects, Methods, and Properties
- Exercise: Alerts, Writing, and Changing Background Color
- Lab: Exercises included throughout lesson

- Variables, Arrays, and Operators
  - JavaScript Variables
  - A Loosely Typed Language
  - Google Chrome DevTools
  - Storing User-Entered Data
  - Exercise: Using Variables
  - Constants
  - Arrays
  - Exercise: Working with Arrays
  - Associative Arrays
  - Playing with Array Methods
  - JavaScript Operators
  - The Modulus Operator
  - Playing with Operators
  - The Default Operator
  - Exercise: Working with Operators
  - Lab: Exercises included throughout lesson
- JavaScript Functions
  - CSS Selectors
  - The innerHTML Property
  - Nodes, NodeLists, and HTMLCollections
  - Accessing Element Nodes
  - Exercise: Accessing Elements
  - Dot Notation and Square Bracket Notation
  - Accessing Elements Hierarchically
  - Exercise: Working with Hierarchical Elements
  - Accessing Attributes
  - Creating New Nodes
  - Focusing on a Field
  - Shopping List Application

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- Exercise: Logging
- Exercise: Adding EventListeners
- Exercise: Adding Items to the List
- List Items
- Exercise: Removing List Items
- Exercise: Preventing Duplicates and Zero-length Product Names
- Manipulating Tables
- Lab 1: Exercises included throughout lesson
- Accessing Elements
- Working with Hierarchical Elements
- Logging
- Adding EventListerners
- Adding Items to the List
- Dynamically Adding Remove Buttons to the List Items
- Removing List Items
- Preventing Duplicates and Zero-length Product Names
- After completing this module, students will be able to:
- Access specific nodes within the HTML DOM.
- Identify nodes by tag name, class name, and CSS selector.
- Access nodes hierarchically.
- Create and remove nodes.
- Dynamically create an HTML page with JavaScript.

- HTML Forms
  - How HTML Forms Work
  - The form Element
  - Form Elements
  - Buttons
  - Exercise: Creating a Registration Form
  - Checkboxes
  - Radio Buttons
  - Exercise: Adding Checkboxes and Radio Buttons
  - Fieldsets
  - Select Menus
  - Textareas
  - Exercise: Adding a Select Menu and a Textarea
  - HTML Forms and CSS

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- Lab: Exercises included throughout lesson
- Creating a Registration Form
- Adding Checkboxes and Radio Buttons
- Adding a Select Menu and a Textarea

- JavaScript Form Validation
  - Server-side Form Validation
  - HTML Form Validation
  - Accessing Form Data
  - Form Validation with JavaScript
  - Exercise: Checking the Validity of the Email and URL Fields
  - Checking Validity on Input and Submit Events
  - Adding Error Messages
  - Validating Textareas
  - Validating Checkboxes
  - Validating Radio Buttons
  - Validating Select Menus
  - Exercise: Validating the Ice Cream Order Form
  - Giving the User a Chance
  - Lab: Exercises included throughout lesson
- Regular Expressions
  - Getting Started
  - Regular Expression Syntax
  - Backreferences
  - Form Validation with Regular Expressions
  - Cleaning Up Form Entries
  - Exercise: Cleaning Up Form Entries
  - A Slightly More Complex Example
  - Lab: Exercises included throughout lesson

REQUIREMENTS:

- Basic computer and typing skills.

Difficulty level



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CERTIFICATE:

Certificate of completing an authorized Microsoft training

TRAINER:

Microsoft Certified Trainer

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