

## How to Code HTML5, CSS3, & JavaScript

Length: 5 Days

### COURSE CONTENT

#### 1) GETTING STARTED ON THE WEB

##### a) Understanding How the Web Works

- i) A Brief History of HTML and the World Wide Web
- ii) Creating Web Content
- iii) Understanding Web Content Delivery
- iv) Selecting a Web Hosting Provider
- v) Testing with Multiple Web Browsers and Devices
- vi) Creating a Sample File
- vii) Using FTP to Transfer Files
- viii) Understanding Where to Place Files on the Web Server
- ix) Distributing Content Without a Web Server

##### x) Tips for Testing Web Content

##### b) Structuring an HTML Document

- i) Getting Prepared
- ii) Getting Started with a Simple Web Page
- iii) HTML Tags Every Web Page Must Have
- iv) Organizing a Page with Paragraphs and Line Breaks
- v) Organizing Your Content with Headings
- vi) Understanding Semantic Elements
- vii) Using <header> in Multiple Ways
- viii) Understanding the <section> Element
- ix) Using <article>
- x) Implementing the <nav> Element
- xi) When to Use <aside>
- xii) Using <footer> Effectively

##### c) Understanding Cascading Style Sheets

- i) How CSS Works

- ii) A Basic Style Sheet
- iii) A CSS Style Primer
- iv) Using Style Classes
- v) Using Style IDs
- vi) Internal Style Sheets and Inline Styles
- d) Understanding JavaScript**
- i) Learning Web Scripting Basics
- ii) How JavaScript Fits into a Web Page
- iii) Exploring JavaScript's Capabilities
- iv) Displaying Time with JavaScript
- v) Testing the Script
- e) Validating and Debugging Your Code**
- i) Validating Your Web Content
- ii) Debugging HTML and CSS Using Developer Tools
- iii) Debugging JavaScript Using Developer Tools

#### 2) Building Blocks of Practical Web Design

##### a) Working with Fonts, Text Blocks, Lists, and Tables

- i) Working with Special Characters
- ii) Boldface, Italic, and Special Text Formatting
- iii) Tweaking the Font
- iv) Using Web Fonts
- v) Aligning Text on a Page
- vi) The Three Types of HTML Lists
- vii) Placing Lists Within Lists
- viii) Creating a Simple Table
- ix) Controlling Table Sizes
- x) Alignment and Spanning Within Tables
- xi) Page Layout with Tables
- xii) Using CSS Columns
- b) Using External and Internal Links**
- i) Using Web Addresses

- ii) Linking Within a Page Using Anchors
- iii) Linking Between Your Own Web Content
- iv) Linking to Non-HTML Files
- v) Linking to External Web Content
- vi) Linking to an Email Address
- vii) Opening a Link in a New Browser Window
- viii) Giving Titles to Links
- ix) Using CSS to Style Hyperlinks
- x) Using Links Effectively
- c) Working with Colors, Images, and Multimedia**
  - i) Best Practices for Choosing Colors
  - ii) Understanding Web Colors
  - iii) Using Hexadecimal Values for Colors
  - iv) Using RGB and RGBA Values for Colors
  - v) Using CSS to Set Background, Text, and Border Colors
  - vi) Choosing Graphics Software
  - vii) The Least You Need to Know About Graphics
  - viii) Preparing Photographic Images
  - ix) Creating Banners and Buttons
  - x) Optimizing Images by Reducing or Removing Colors
  - xi) Creating Tiled Background Images
  - xii) Placing Images on a Web Page
  - xiii) Describing Images with Text
  - xiv) Specifying Image Height and Width
  - xv) Aligning Images
  - xvi) Turning Images into Links
  - (1) Using Background Images
  - (2) Using Image Maps
  - ii) Linking to Multimedia Files
  - (1) Embedding Multimedia Files
  - (2) Additional Tips for Using Multimedia
- 3) Advanced Web Page Design with CSS**
  - a) Working with Margins, Padding, Alignment, and Floating**
    - i) Using Margins
    - ii) Padding Elements
    - iii) Keeping Everything Aligned
    - iv) Centering Blocks of Content
    - v) Understanding the float Property
  - b) Understanding the CSS Box Model and Positioning**
    - i) The CSS Box Model
    - ii) Changing the Box Model
    - iii) The Whole Scoop on Positioning
    - iv) Controlling the Way Things Stack Up
  - v) Managing the Flow of Text
  - c) Using CSS to Do More with Lists, Text, and Navigation**
    - i) HTML List Refresher
    - ii) How the CSS Box Model Affects Lists
    - iii) Placing List Item Indicators
    - iv) Creating Image Maps with List Items and CSS
    - v) How Navigation Lists Differ from Regular Lists
    - vi) Creating Vertical Navigation with CSS
    - vii) Creating Horizontal Navigation with CSS
  - d) Creating Layouts Using Modern CSS Techniques**
    - i) Getting Ready to Do Page Layout
    - ii) The Importance of Putting Mobile Devices First
    - iii) Understanding Fixed Layouts
    - iv) Understanding Liquid Layouts
    - v) Creating a Fixed/Liquid Hybrid Layout
    - vi) Using Modern CSS Layout Techniques
  - e) Taking Control of Backgrounds and Borders**
    - i) Reviewing Background and Border Basics
    - ii) Using Multiple Borders and Backgrounds
    - iii) Using Forgotten Background Properties
    - iv) Using Gradients as Backgrounds
    - v) Rounding the Corners of HTML Elements
    - vi) Using Images as Borders
    - vii) Understanding CSS Outlines
  - f) Using CSS Transformations and Transitions**
    - i) Understanding CSS 2D Transformations
    - ii) Transforming Elements in Three Dimensions
    - iii) Working with CSS Transitions
    - iv) Using JavaScript to Trigger Transitions
  - g) Animating with CSS and the Canvas**
    - i) Understanding CSS Animation
    - ii) Using the CSS Canvas
    - iii) Choosing Between CSS Animation and Canvas Animation
- 4) Responsive Web Design**
  - a) Understanding the Importance of Responsive Web Design**
    - i) What Is Responsive Web Design?
    - ii) What Is Progressive Enhancement?

iii) Writing HTML for Responsive Web

Design

iv) Validating HTML, CSS, and JavaScript

**b) Designing for Mobile Devices**

i) Designing for Mobile Devices

ii) Understanding Mobile First Design

iii) Using Responsive Tables and Images

iv) Creating Responsive Layouts Without Media Queries

v) Alternatives for Mobile Design Besides RWD

**c) Using Media Queries and Breakpoints**

i) What Is a Media Query?

ii) Using Media Query Expressions

iii) What Is a Breakpoint?

iv) How to Define Breakpoints in Your CSS

v) Optimal Breakpoints

**5) Getting Started with Dynamic Sites**

**a) Understanding Dynamic Websites and HTML5 Applications**

i) Understanding the Different Types of Scripting

ii) Including JavaScript in HTML

iii) Displaying Random Content

iv) Understanding the Document Object Model

v) Changing Images Based on User Interaction

vi) Thinking Ahead to Developing HTML5 Applications

**b) Getting Started with JavaScript Programming**

i) Basic Concepts

ii) JavaScript Syntax Rules

iii) Using Comments

iv) Best Practices for JavaScript

v) Understanding JSON

**c) Working with the Document Object Model (DOM)**

i) Understanding the Document Object Model

ii) Using window Objects

iii) Working with the document Object

iv) Accessing Browser History

v) Working with the location Object

vi) More About the DOM Structure

vii) Working with DOM Nodes

viii) Creating Positionable Elements (Layers)

ix) Hiding and Showing Objects

x) Modifying Text in a Page

xi) Adding Text to a Page

**d) Using JavaScript Variables, Strings, and Arrays**

i) Using Variables

ii) Understanding Expressions and Operators

iii) Data Types in JavaScript

iv) Converting Between Data Types

v) Using String Objects

vi) Working with Substrings

vii) Using Numeric Arrays

viii) Using String Arrays

ix) Sorting a Numeric Array

x) Using Functions

xi) Introducing Objects

xii) Using Objects to Simplify Scripting

xiii) Extending Built-in Objects

xiv) Using the Math Object

xv) Working with Math Methods

xvi) Working with Dates

**e) Controlling Flow with Conditions and Loops**

i) The if Statement

ii) Using Shorthand Conditional

Expressions

iii) Testing Multiple Conditions with if and else

iv) Using Multiple Conditions with switch

v) Using for Loops

vi) Using while Loops

vii) Using do...while Loops

viii) Working with Loops

ix) Looping Through Object Properties

**f) Responding to Events and Using**

**Windows**

i) Understanding Event Handlers

ii) Using Mouse Events

iii) Using Keyboard Events

iv) Using the load and unload Events

v) Using click to Change the Appearance of a <div>

vi) Controlling Windows with Objects

vii) Moving and Resizing Windows

viii) Using Timeouts

ix) Displaying Dialog Boxes

**g) JavaScript Best Practices**

i) Scripting Best Practices

ii) Reading Browser Information

iii) Cross-Browser Scripting

iv) Supporting Non-JavaScript-Enabled

Browsers

- v) Creating an Unobtrusive Script
  - h) Using Third-Party JavaScript Libraries and Frameworks**
    - i) Using Third-Party JavaScript Libraries
    - i) Adding JavaScript Effects by Using a Third-Party Library
    - ii) Using JavaScript Frameworks
  - 6) Advanced Website Functionality and Management**
    - a) Working with Web-Based Forms**
      - i) How HTML Forms Work
      - ii) Creating a Form
      - iii) Accepting Text Input
      - iv) Naming Each Piece of Form Data
      - v) Labeling Each Piece of Form Data
      - vi) Grouping Form Elements
      - vii) Exploring Form Input Controls
      - viii) Using HTML5 Form Validation
      - ix) Submitting Form Data
      - x) Accessing Form Elements with JavaScript
    - b) Organizing and Managing a Website**
      - i) When One Page Is Enough
      - ii) Organizing a Simple Site
      - iii) Organizing a Larger Site
      - iv) Optimizing Your Site for Search Engines
      - v) Writing Maintainable Code
      - vi) Thinking About Version Control
      - vii) Using HTML and CSS Frameworks
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