

Rapid Introduction to HTML, CSS, and JavaScript (4 Days)

Overview

In this class, students get a rapid hands-on introduction to client-side programming with HTML, CSS, and JavaScript. The course is meant for students who want to need to get a jump start on all three technologies. Students should be prepared to cover a lot and to be ready to spend some time afterward reviewing the content on their own to solidify and build upon the skills taught in class.

Prerequisites

Experience in the following *is required* for this class:

- Working with computers regularly

Experience in the following *would be useful* for this class:

- Programming Experience
- A basic understanding of how the web works

Goals

1. Learn the basics of Web development
2. Learn the difference between HTML and XHTML
3. Learn to create links in HTML documents
4. Learn to add images to HTML documents
5. Learn to create HTML tables
6. See how forms are built in HTML (this will be covered very quickly)
7. Learn the benefits of CSS.
8. Learn to avoid using deprecated tags and attributes.
9. Learn CSS syntax.
10. Learn to use <div> and tags appropriately.
11. Learn most of the common properties and their values.
12. Learn how JavaScript is used
13. Learn JavaScript syntax
14. Learn to work with JavaScript variables
15. Learn to create your own functions in JavaScript
16. Learn to write flow control logic in JavaScript

1. A Quick Overview of Web Development

- A. Client-side Programming
 - I. HTML
 - II. Cascading Style Sheets
 - III. JavaScript
 - IV. Dynamic HTML
 - V. Ajax
- B. Server-side Programming
 - . ColdFusion
 - I. Java EE
 - II. ASP.NET
 - III. Python
 - IV. PHP
 - V. Node.js

2. Introduction to HTML

- . Getting Started
 - A. A Simple HTML Document
 - B. The HTML Skeleton
 - . The <head> Element
 - I. The <body> Element
 - II. Whitespace
 - C. HTML Elements
 - . Attributes
 - I. Empty vs Container Tags
 - II. Blocks and Inline Elements
 - III. Comments
 - D. Special Characters
 - E. The HTML/XHTML Version
 - F. HTML5
 - G. lang and xml:lang

3. Paragraphs, Headings and Text

- . Paragraphs
 - A. Breaks and Horizontal Rules
 - B. Creating an HTML Page
 - C. Quoted Text
 - D. Preformatted Text
 - E. Text Level Semantic Elements
 - F. HTML5 and the HTML 4 Formatting Elements
 - G. Documenting Changes

4. HTML Links

- . Text Links
 - A. Absolute vs Relative Paths
 - . Absolute Paths
 - I. Relative Paths
 - II. Default Pages
 - B. Targeting New Windows
 - C. Email Links
 - D. Adding Links
 - E. Anchors
 - . Anchors with the name Attribute
 - I. Anchors with the id Attribute
 - II. name vs id
 - F. The title Attribute

5. HTML Images

- . Inserting Images
 - . Making Images Accessible
 - I. Alternative Text
 - II. Long Descriptions
 - III. Height and Width Attributes
 - A. Image Links
 - B. Adding Images to the Page

6. HTML Lists

- . Unordered Lists
 - . Nesting Unordered Lists
 - A. Ordered Lists
 - . Nesting Ordered Lists
 - I. Start Attribute
 - B. Definition Lists
 - C. Creating Lists

7. HTML Tables

- . Creating Tables
 - A. Adding a Caption
 - B. Attributes
 - C. Merging Cells
 - D. Creating Tables

8. HTML Forms

- . How HTML Forms Work
 - A. The <form> Tag
 - . Get vs Post
 - B. Form Elements
 - . id and Name Attributes
 - I. Labels
 - II. Text Fields
 - III. Password Fields
 - IV. Submit and Reset Buttons
 - V. Hidden Fields
 - C. Creating a Registration Form
 - . Checkboxes
 - I. Radio Buttons
 - D. Adding Checkboxes and Radio Buttons
 - . Select Menus
 - I. Textareas
 - E. Adding a Select Menu and a Textarea

9. Crash Course in CSS

- . Benefits of Cascading Style Sheets
 - A. CSS Rules
 - B. Selectors
 - C. Precedence of Selectors
 - D. The Cascade
 - E. Creating an Embedded Style Sheet
 - F. Creating an External Style Sheet
 - G. Adding Inline Styles
 - H. Media Types
 - I. <div> and
 - J. Divs and Spans
 - K. Units of Measurement
 - L. The Inherit Value
 - M. @import

10. CSS Fonts

- . Font - the old way
 - A. Font-family
 - B. Font-size
 - C. Font Family and Font Size
 - D. Font-style
 - E. Font-variant
 - F. Font-weight
 - G. Font Style, Font Variant and Font Weight

11. CSS Text

- . Letter-spacing
 - A. Word-spacing
 - B. Line-height
 - C. Text-align
 - D. Text-decoration
 - E. Text-indent
 - F. Text-transform
 - G. Vertical-align
 - H. White-space
 - I. Text Properties

12. Colors and Backgrounds

- . About Color Values
 - A. Color
 - B. Background-color
 - C. Background-image
 - D. Colors and Backgrounds

13. JavaScript Basics

- . The Name "JavaScript"
 - A. What is ECMAScript?
 - B. The HTML DOM
 - C. JavaScript Syntax
 - D. Accessing Elements
- . Dot Notation
 - I. Square Bracket Notation
 - E. Where Is JavaScript Code Written?
- F. The "javascript" Pseudo-Protocol
- G. JavaScript Objects, Methods and Properties
- . Methods
 - I. Properties
 - II. The Implicit window Object
 - H. Exercise: Alerts, Writing, and Changing Background Color

14. Variables, Arrays and Operators

- . JavaScript Variables
 - . A Loosely typed Language
 - I. Variable Naming
 - II. Storing User Entered Data
 - III. Constant
 - IV. Associative Arrays
 - V. Array Properties and Methods
 - A. Exercise: Using Variables
 - B. Arrays
 - C. Exercise: Working with Arrays
 - D. JavaScript Operators
 - E. Exercise: Working with Operators

15. JavaScript Functions

- . Global Functions
 - A. Exercise: Working with Global Functions
 - B. User-defined Functions
 - C. Exercise: Writing a JavaScript Function
 - D. Returning Values from Functions

16. Conditionals and Loops

- . Conditionals
 - A. Exercise: Conditional Processing
 - B. Loops
 - C. Exercise: Working with Loops