



## Introduction to HTML, CSS, and JavaScript

**Course #:** HT-103      **Duration:** 4 days

### Prerequisites

Experience working with computers regularly is required and a basic understanding of how the web works and some programming experience would be useful.

### Details

HTML, CSS, and JavaScript are the cornerstone technologies of modern web design. The course is designed for students who need a jump start on all three technologies and who can handle an intensive, four-day experience.

In this class, you get a rapid, hands-on introduction to client-side programming with HTML, CSS, and JavaScript. You will learn how to structure a web page with HTML, add style with CSS, and make your website come to life with JavaScript.

### Software Needed

Any text editor and modern web browser.

### Outline

Rapid Introduction to HTML, CSS, and JavaScript

- **A Quick Overview of Web Development**
  - Client-side Programming
    - HTML
    - Cascading Style Sheets
    - JavaScript
    - Ajax
    - JavaScript Frameworks
  - Server-side Programming
    - Java EE
    - NET
    - Python
    - PHP
    - ColdFusion
    - js
- **Introduction to HTML**
  - Getting Started
  - The HTML Skeleton
    - The <head> Element
    - The <body> Element

- Whitespace
- Viewing Page Source
- HTML Elements
  - Attributes
  - Empty vs. Container Tags
  - Blocks and Inline Elements
  - Comments
- Special Characters
- History of HTML
- lang Attribute
- **Paragraphs, Headings, and Text**
  - Paragraphs
  - Breaks and Horizontal Rules
  - Quoted Text
  - Preformatted Text
  - Text-Level Semantic Elements
- **HTML Links**
  - Text Links
  - Absolute vs. Relative Paths
    - Absolute Paths
    - Relative Paths
    - Default Pages
  - Targeting New Windows
  - Email Links
  - Targeting a Specific Location on the Page
  - The title Attribute
- **HTML Images**
  - Inserting Images
    - Making Images Accessible
    - Alternative Text
    - Long Descriptions
    - Height and Width Attributes
  - Image Links
- **HTML Lists**
  - Unordered Lists
    - Nesting Unordered Lists
  - Ordered Lists
    - Nesting Ordered Lists
    - The type Attribute
    - The start Attribute
  - Definition Lists
- **Crash Course in CSS**
  - Benefits of Cascading Style Sheets
  - CSS Rules
  - CSS Comments
  - Selectors
    - Type Selectors
      - Class Selectors
      - ID Selectors
      - Attribute Selectors
      - The Universal Selector
      - Grouping
  - Combinators
    - Descendant Combinators
    - Child Combinators
    - General Sibling Combinators
    - Adjacent Sibling Combinators
  - Precedence of Selectors
  - How Browsers Style Pages
  - CSS Resets
  - CSS Normalizers
  - External Stylesheets, Embedded Stylesheets, and Inline Styles

- External Stylesheets
  - Embedded Stylesheets
  - Inline Styles
- <div> and <span>
- Media Types
- Units of Measurement
  - Absolute vs. Relative Units
  - Pixels
  - Ems and Rems
  - Percentages
  - Other Units
- Inheritance
  - The inherit Value
- **CSS Fonts**
  - font-family
    - Specifying by Font Name
    - Specifying Font by Category
  - @font-face
    - Getting Fonts
  - font-size
    - Relative font-size Terms
    - Best Practices
  - font-style
  - font-variant
  - font-weight
  - line-height
  - font
- **Color and Opacity**
  - About Color and Opacity
  - Color and Opacity Values
    - Color Keywords
    - RGB Hexadecimal Notation
    - RGB Functional Notation
    - HSL Functional Notation
  - color
  - opacity
- **CSS Text**
  - letter-spacing
  - text-align
  - text-decoration
  - text-indent
  - text-shadow
  - text-transform
  - white-space
  - word-break
  - word-spacing
- **JavaScript Basics**
  - The Name “JavaScript”
  - What is ECMAScript?
  - The HTML COM
  - JavaScript Syntax
    - Basic Rules
  - Accessing Elements
    - Dot Notation
    - Square Bracket Notation
  - Where Is JavaScript Code Written?
  - JavaScript Objects, Methods, and Properties
    - Methods
    - Properties
- **Variables, Arrays, and Operators**
  - JavaScript Variables
    - A Loosely Typed Language

- Google Chrome DevTools
- Variable Naming
- Storing User-Entered Data
- Constants
- Arrays
  - Associative Arrays
  - Array Properties and Methods
- Playing with Array Methods
- JavaScript Operators
- The Modulus Operator
- Playing with Operators
- The Default Operator
- **JavaScript Functions**
  - Global Objects and Functions
    - parseFloat(object)
    - parseInt(object)
    - isNaN(object)
  - User-defined Functions
    - Function Syntax
    - Passing Values to Functions
    - Returning Values from Functions
- **Built-In JavaScript Objects**
  - String
  - Math
  - Date
  - Helper Functions
- **Conditionals and Loops**
  - Conditionals
    - if-else if-else Conditions
  - Short-circuiting
  - Switch / Case
  - Ternary Operator
  - Truthy and Falsy
  - Loops
    - while Loop Syntax
    - do...while Loop Syntax
    - for Loop Syntax
    - for...of Loop Syntax
    - for...in Loop Syntax
  - break and continue
  - Array: forEach()
- **Event Handlers and Listeners**
  - On-event Handlers
    - The getElementById() Method
  - The addEventListener() Method
  - Capturing Key Events
    - Benefits of Event Listeners
    - Timers