

Web Development Course Syllabus

Course Structure

Total Course Duration: 105 hours (35 sessions)

Modules

1. **HTML Module** (15 hours - 5 sessions)
2. **CSS Module** (30 hours - 10 sessions)
3. **HTML+CSS Projects Module** (15 hours - 5 sessions)
4. **JavaScript Module** (45 hours - 15 sessions)

Prerequisites

- Basic computer skills
- VS Code installed
- Chrome or Edge browser
- No prior programming experience required

Detailed Curriculum

HTML Module (5 sessions)

Session 1: HTML Introduction & Basic Structure

- Introduction to HTML
- Headings (h1 - h6)
- Paragraphs and text formatting
 - `<p>` tag
 - Text styling: `<u>`, `<mark>`, ``, `<i>`
- Horizontal rule and line breaks (`<hr>`, `
`)
- Inline vs. Block elements

Session 2: Links & Images

- Images (`` tag)
- Videos (`<video>` tag)
- Links (`<a>` tag)

Session 3: Lists

- Ordered lists (``)
- Unordered lists (``)

Session 4: Tables

- Basic table structure (`<table>`)
- Merging cells (`colspan`, `rowspan`)

Session 5: Forms

- Input types
 - text, email, password
 - color, date
 - radio, checkbox
- Submit button
- Select dropdown
- Form attributes
 - Required
 - Placeholder
- Div element (`<div>`)

CSS Module (10 sessions)

Session 1: CSS Introduction

- Introduction to CSS
- Three ways to apply CSS
 - Inline
 - Internal
 - External
- Difference between ID and Class selectors

Session 2-3: Styling Basics

- Background color
- Text styling
 - Color
 - Font size, style, weight, and family
 - Text alignment & transformation
- Spacing
 - Padding
 - Margin
 - Border & Border radius

Session 4-5: Layout and Positioning

- Display property
 - `inline`
 - `block`
 - `inline-block`
- Positioning
 - `relative`
 - `absolute`

- `fixed`
- `static`

Session 6-7: Advanced Layout

- Flexbox
 - `display: flex`
 - `justify-content`
 - `align-items`
- Building header & navbar
- Creating footer

Session 8: Responsive Design

- Media queries
- Responsive design principles

Session 9: Animations

- `@keyframes`
- Animation properties
 - name
 - duration
 - delay
 - direction
 - iteration count

Session 10: Best Practices

- CSS optimization
- Advanced techniques

HTML+CSS Projects Module (5 sessions)

Session 1: Project Planning

- Designing project requirements
- Wireframing
- Design principles

Sessions 2-3: Static Website

- Building a complete static website
- Implementing responsive design
- Cross-browser compatibility

Sessions 4-5: Portfolio Website

- Personal portfolio creation

- Advanced styling
- Responsive layout

JavaScript Module (15 sessions)

Session 1-2: JavaScript Basics

- Introduction to JavaScript
- Ways to write JavaScript
- Variables and declaration rules
- Data types
 - string
 - number
 - boolean
- Operators

Session 3-4: Control Flow

- Conditional statements
 - `if`
 - `if-else`
 - `if-else if`
- Logical operators
- `switch` statement

Session 5-6: Functions and Arrays

- Function declaration
- Arrow functions
- Arrays
 - Creating
 - Manipulating
 - Array methods

Session 7-8: DOM Manipulation

- Introduction to DOM
- DOM attributes
- Manipulating CSS styles
- Inserting and removing elements

Session 9-10: Events and Interactions

- Event handling
 - `onclick`
 - `onload`
 - Keyboard events
 - Mouse events

Session 11-12: Advanced Concepts

- Error handling
- Browser storage
- Dates and timer functions

Session 13: Modern JavaScript

- ES6+ features

Sessions 14-15: Final Project

- Comprehensive project
- Applying all learned concepts

Teaching Approach

Session Structure (3 hours)

1. Review & Introduction (15 min)

- Quick review of previous session
- Overview of current session topics

2. Three-Part Learning

- **Demo: I Code** (20-30 min)
 - Instructor demonstrates concepts
- **Apply: You Code** (15-20 min)
 - Students practice immediately
- **Feedback and Help**
 - Interactive assistance

3. Wrap-up (10 min)

- Session summary
- Homework assignment

Assessment Methods

- In-class coding exercises
- Homework assignments
- Mini-projects
- Final module projects

Customization

The course is adaptable based on:

- Student skill levels
- Time constraints

- Specific learning goals

Additional Resources

- Project ideas document
- Instructor teaching resources
- Supplementary learning materials

Course Completion

By the end of this course, students will have:

- Solid understanding of web development fundamentals
- Ability to create responsive websites
- JavaScript programming skills
- Portfolio of completed projects