

# Frontend Development Course Syllabus

**Total Duration: 90hrs**

## **Module 1: HTML & CSS Foundations**

### **Chapter 1: Introduction to Web & Frontend Development**

- What is the Web?
- Understanding how websites work (client-server model)
- Role of frontend in web development
- Development tools: browser, code editor, DevTools

### **Chapter 2: HTML5 – Structuring Web Pages**

- Basic HTML document structure
- Semantic elements: <header>, <nav>, <section>, etc.
- Working with lists, links, images, tables
- Forms and input fields with validation
- Embedding videos, iframes, and audio

### **Chapter 3: CSS3 – Styling Techniques**

- CSS syntax, selectors, and specificity
- Box model: margin, padding, border, content
- Typography and color systems
- Applying borders, shadows, gradients
- Styling links, buttons, and images

### **Chapter 4: Layout with Flexbox and Grid**

- CSS positioning and z-index
- Flexbox layout: rows, columns, alignment


- CSS Grid: track, fr units, implicit vs explicit grid
- Combining Flexbox and Grid

## **Chapter 5: Responsive Web Design**

- Mobile-first design principles
- Viewport meta tag
- Media queries and breakpoints
- Using responsive units: %, vw/vh, em/rem
- Responsive image techniques

## **Module 2: JavaScript, Git & Mini Project**

### **Chapter 6: JavaScript Fundamentals**

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- Declaring variables (let, const)
  - Data types and type conversion
  - Operators and expressions
  - Conditional statements and loops
  - Functions, scope, return values
  - Arrays and objects basics

### **Chapter 7: DOM Manipulation & Events**

- DOM structure and selectors (getElementById, querySelector)
- Changing text, classes, and styles dynamically
- Handling events (click, input, submit)
- Real examples: menu toggle, image gallery
- JavaScript form validation

### **Chapter 8: Introduction to Git & GitHub**

- What is version control?
- Git basic commands: init, add, commit, push
- GitHub setup and remote repo creation
- Branching and collaboration
- Hosting websites on GitHub Pages

## **Chapter 9: Mini Frontend Project**

- Planning and wireframing your project
- Implementing structure with HTML
- Styling using CSS and layout systems
- Adding interactivity with JavaScript
- Version control and deployment to GitHub



## **Module 3: CSS Framework – Choose One**

### **Option A: Bootstrap 5 – Responsive UI Toolkit**

## **Chapter 10: Bootstrap Setup & Grid System**

- Integrating Bootstrap via CDN
- Understanding containers, rows, and columns
- Responsive breakpoints and layout utilities

## **Chapter 11: Bootstrap Components**

- Navbar, buttons, alerts, modals
- Cards, accordions, and carousels
- Bootstrap forms and validation

## **Chapter 12: Bootstrap Project**

- Designing a responsive website using Bootstrap

- Using prebuilt components for UI
- Customizing theme colors and spacing
- Final deployment on GitHub

## **Option B: Tailwind CSS – Utility-First Framework**

### **Chapter 10: Tailwind CSS Setup & Fundamentals**

- Installing via CDN/PostCSS
- Utility-first CSS approach
- Responsive, hover, and focus classes

### **Chapter 11: Building Layouts with Tailwind**

- Flexbox, Grid, and spacing utilities
- Typography, buttons, and form styles
- Dark mode and custom configurations

### **Chapter 12: Tailwind Project**

- Designing a clean responsive site using Tailwind
- Custom components and design patterns
- Final deployment to GitHub Pages