



# Frontend Development Course Syllabus

**Duration:** 4–6 Months | **Mode:** Online/Offline | **Certificate:** Yes

**Level:** Beginner to Advanced | **Project-Based Learning**

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## **Module 1: Introduction to Frontend Development**

- What is Frontend vs Backend vs Full Stack
  - Overview of Web Technologies
  - Introduction to Web Browsers, DNS, and Hosting
  - Tools Setup (VS Code, Git, Chrome DevTools)
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## **Module 2: HTML & HTML5 (Structure)**

- Basic HTML Tags & Attributes
  - Forms, Tables, Lists, Images, Media
  - HTML5 Semantic Elements
  - Iframes, Audio, Video, and Embedding
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## **Module 3: CSS & CSS3 (Design)**

- Inline, Internal, External CSS
  - Selectors, Properties, Units, Colors
  - Box Model, Positioning, Display, Float
  - Pseudo-classes & Pseudo-elements
  - CSS3: Gradients, Shadows, Transitions, Animations
  - Media Queries & Responsive Design
  - Introduction to CSS Variables
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## **Module 4: JavaScript (Logic)**

- Syntax, Variables, Data Types

- Operators, Conditionals, Loops
  - Functions & Arrow Functions
  - Arrays & Objects
  - DOM Manipulation
  - Event Handling
  - Form Validation
  - LocalStorage & SessionStorage
  - JS Timing Events (setTimeout, setInterval)
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#### **Module 5: Advanced JavaScript (Modern JS/ES6+)**

- ES6+: let, const, arrow functions, template literals
  - Destructuring, Spread & Rest Operators
  - Callback, Promise, Async/Await
  - Fetch API & JSON
  - Error Handling
  - Modules & Classes in JS
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#### **Module 6: Version Control with Git & GitHub**

- Git Introduction & Setup
  - Git Workflow: init, add, commit, push, pull
  - Branching and Merging
  - Collaborating on GitHub
  - Hosting projects on GitHub Pages
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#### **Module 7: Bootstrap & UI Frameworks**

- Introduction to Bootstrap 5
- Grid System, Utilities, Components
- Responsive Design with Bootstrap

- Integrating Bootstrap with Custom CSS
  - Introduction to Tailwind CSS (*Optional/Advanced*)
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## **Module 8: Real-Time Projects (Mini)**

- Personal Portfolio Website
  - Restaurant or E-commerce Landing Page
  - Contact Form with JS Validation
  - Mobile-Responsive Web Pages
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## **Module 9: React.js (Advanced UI Framework)**

- What is React & Why React?
  - JSX, Components, Props, State
  - Functional vs Class Components
  - React Hooks: useState, useEffect
  - Forms Handling in React
  - Conditional Rendering & Lists
  - React Router Basics
  - Component Lifecycle
  - Project Structure Best Practices
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## **Module 10: APIs and JSON Handling in React**

- Fetching Data from REST APIs
  - Displaying Dynamic Content
  - Error & Loading States
  - Real-world Data Handling
  - Mini Project: Weather App / News App
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## **Module 11: Testing, Deployment & Optimization**

- Chrome DevTools for Debugging
  - Page Speed Optimization Tips
  - Introduction to SEO Basics for Frontend
  - Hosting with GitHub Pages, Netlify, Vercel
  - Deploying React Apps
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## **Module 12: Final Capstone Project**

 You'll build a **full-fledged frontend website or app**, such as:

- Portfolio + Blog Website
  - Online Store UI (E-commerce Frontend)
  - Multi-page Company Website
  - Dashboard UI for Admin Panel
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## **Conclusion & Certification**

- Final Exam / Viva / Practical Review
- Internship Opportunities
- Certificate of Completion
- Pathways to Backend/Full Stack/React Native