Frontend Development Course Syllabus

Total Duration: 90hrs

Module 1: HTML, CSS, JavaScript

Chapter 1: Introduction to Web & Frontend Development

- Understanding the Internet, HTTP, Browsers & Servers

- Client vs Server-Side

- Web Development Life Cycle

- Text Editors & IDEs: VS Code Setup

- Chrome Developer Tools Basics

Chapter 2: HTML5 – Building the Structure

- Semantic Elements and Tags

- Page Structure (Header, Footer, Nav, Main)

- Forms: Input Types, Validation Attributes

- Embedding Media: Video, Audio, Images

- Tables and Lists

- Meta Tags and SEO Basics

Chapter 3: CSS3 – Styling Web Pages

- CSS Syntax and Selectors

- Box Model: Margin, Padding, Border

- Positioning: Relative, Absolute, Fixed

- Display: Block, Inline, Flex, Grid

- Pseudo Classes and Transitions

- Media Queries for Responsive Design

- Web Fonts, Custom Fonts, Icons

Chapter 4: JavaScript Essentials

- Variables (var, let, const) & Data Types

- Operators, Conditions, Loops

- Arrays and Objects

- Functions and Scope

- DOM Manipulation (getElementById, querySelector, etc.)

- Events and Event Listeners

- Form Validation

- Local Storage and Session Storage

Chapter 5: Version Control with Git & GitHub

- Git Basics: Init, Add, Commit, Push

- GitHub Setup and Collaboration

- Branching and Merging

- Resolving Merge Conflicts

- Hosting Pages with GitHub Pages

Module 2: React JS with Real-World Projects

Chapter 6: Introduction to React.js

- Why React? Key Features and Use Cases

- JSX Syntax and Rules

- Functional Components vs Class Components

- Props and Component Communication

- useState Hook for State Management

Chapter 7: Advanced React Features

- useEffect Hook and Lifecycle Simulation

- Conditional Rendering

- List Rendering with Keys

- Handling Events and Forms in React

- Controlled vs Uncontrolled Components

- Lifting State Up

- Prop Drilling and Composition

Chapter 8: React Routing & Navigation

- Introduction to React Router

- Route, Link, Navigate Components

- Nested Routes

- URL Parameters & Query Params

- Programmatic Navigation

Optional Subjects (Choose Any 1 UI Framework)

Option A: Bootstrap (Responsive UI Toolkit)

- Grid System & Layout

- Navbar, Cards, Buttons, Alerts

- Modals, Accordions, Tabs

- Forms and Form Validation

- Utility Classes

- Integrating Bootstrap with React

Option B: Tailwind CSS (Utility-First CSS Framework)

- Tailwind Setup with React

- Utility Classes & Responsive Design

- Customizing Colors, Fonts, Breakpoints

- Reusable Components with Tailwind

- Dark Mode & Theme Switching

- Best Practices in Tailwind Projects