Website Development and Design – Full Stack Course Syllabus

Course Overview

This Website Development and Design course provides complete full stack training, covering front-end, back-end, databases, UI/UX, and deployment. The program focuses on hands-on learning, real-world projects, and industry tools to prepare learners for professional web development careers.

Module 1: Introduction to Web Development

- What is website development and design
- How the web works (HTTP/HTTPS)
- Front-end vs back-end development
- Full stack development overview
- Career opportunities in web development

Module 2: Web Design Fundamentals

- Principles of web design
- Color theory and typography
- Layouts and visual hierarchy
- User experience (UX) basics
- User interface (UI) best practices

Module 3: HTML Fundamentals

- HTML structure and elements
- Headings, paragraphs, links, images
- Forms and input elements
- Tables and lists

- Semantic HTML and best practices

Module 4: CSS Fundamentals

- CSS syntax and selectors
- Colors, fonts, and backgrounds
- Box model and positioning
- Flexbox and Grid layout
- Responsive design using media queries

Module 5: JavaScript Basics

- Introduction to JavaScript
- Variables, data types, and operators
- Functions and events
- DOM manipulation
- Form validation and interactivity

Module 6: Responsive Website Design

- Mobile-first design approach
- Responsive layouts
- Cross-browser compatibility
- CSS frameworks overview
- Performance and accessibility basics

Module 7: Front-End Frameworks

- Introduction to modern frameworks
- React basics overview
- Components and props
- State management basics
- Building dynamic user interfaces

Module 8: Backend Development Basics

- Introduction to backend development
- Server-side concepts
- PHP or Node.js overview
- Handling requests and responses
- Backend project structure

Module 9: Database Management

- Introduction to databases
- SQL basics and queries
- MySQL database design
- CRUD operations
- Connecting database with backend

Module 10: API Development

- What are APIs
- RESTful API concepts
- Creating simple APIs
- API testing tools
- Data exchange between frontend and backend

Module 11: Authentication and Security

- User authentication concepts
- Login and registration systems
- Password encryption
- Web security best practices
- Preventing common vulnerabilities

Module 12: Version Control and Collaboration

- Introduction to Git
- GitHub basics
- Version control workflows
- Collaboration and teamwork
- Managing project versions

Module 13: Website Deployment

- Hosting and domain basics
- Deploying websites on servers
- Using cPanel and FTP
- Live website testing
- Maintenance and updates

Module 14: Performance Optimization

- Website speed optimization
- Image and asset optimization
- Code optimization techniques
- SEO-friendly development
- Performance testing tools

Module 15: Real-World Projects

- Business website project
- Dynamic web application project
- Full stack website development project
- Project presentation and review
- Portfolio development

Tools and Technologies Covered

- HTML5, CSS3, JavaScript
- React (Basics)

- PHP / Node.js
- MySQL Database
- Git and GitHub
- Hosting and Deployment Tools

Learning Outcomes

- Design responsive and user-friendly websites
- Develop full stack web applications
- Build secure backend systems
- Manage databases and APIs
- Deploy and maintain live websites

Career Opportunities

- Web Developer
- Full Stack Developer
- Front-End Developer
- Back-End Developer
- Freelance Web Developer