

## 1. Introduction to Web Development:

Understanding the Internet and the World Wide Web

Evolution of web technologies

Role of web developers and designers

## 2. HTML (Hypertext Markup Language):

HTML syntax and structure

Creating web pages with HTML

Working with text, links, and images

Forms and input elements

## 3. CSS (Cascading Style Sheets):

Styling web pages with CSS

CSS selectors and properties

Layout and positioning

CSS frameworks and libraries

## 4. JavaScript:

Introduction to JavaScript

Variables, data types, and operators

Control structures (if statements, loops)

DOM manipulation

Event handling and AJAX

## 5. Responsive Web Design:

Creating websites that adapt to different screen sizes

Media queries and breakpoints

Mobile-first design principles

Testing and debugging responsive designs

## 6. Web Design Principles:

User-centered design

Typography and color theory

Visual hierarchy and layout

Usability and accessibility

## 7. Front-end Development Tools:

Text editors and integrated development environments (IDEs)

Version control systems (e.g., Git)

Browser developer tools

Web development extensions and plugins

## 8. Web Graphics and Multimedia:

Working with images (JPEG, PNG, SVG)

Audio and video integration

Optimizing media for the web

CSS animations and transitions

## 9. Web Hosting and Deployment:

Domain registration and hosting services

Uploading files to a web server

Domain name system (DNS)

SSL certificates and HTTPS

## **10. Back-end Development (Optional):**

Introduction to server-side scripting

Server-side programming languages (e.g., PHP, Python, Node.js)

Databases and SQL

Building dynamic web applications

## **11. Content Management Systems (CMS):**

Introduction to CMS platforms (e.g., WordPress, Joomla, Drupal)

Customizing and managing CMS-based websites

## **12. Web Security:**

Common web security threats

Securing web applications

Authentication and authorization

Data encryption and HTTPS

## **13. Web Performance Optimization:**

Techniques for improving website speed

Caching and content delivery networks (CDNs)

Minification and compression

## **14. Web Analytics and SEO:**

Using web analytics tools (e.g., Google Analytics)

Search engine optimization (SEO) basics

SEO best practices for web development

## **15. Project Development:**

Practical hands-on projects to apply the concepts learned

Building a portfolio of web projects

Collaborative development and version control

## **16. Industry Trends and Emerging Technologies:**

Staying up-to-date with web development trends

Exploring emerging technologies (e.g., Progressive Web Apps, WebAssembly)

## **17. Final Projects and Showcase:**

Capstone project development

Presentation and demonstration of completed projects