

Web Development Fundamentals

Batch 2

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Course Description

This course provides a comprehensive introduction to the fundamental concepts and technologies used in modern web development. Students will learn the building blocks of web development, including HTML, CSS and Javascript, and gain hands-on experience creating and styling web pages. By the end of this course, students will have the foundational knowledge and skills to continue exploring more advanced topics in web development.

Target Audience

This course is designed for beginners with little to no prior experience in web development. It is suitable for:

- College students interested in pursuing a career in web development
- Professionals looking to switch careers or enhance their skills
- Hobbyists or enthusiasts eager to learn how to build websites from scratch

Course Objectives

By the end of the course, students will be able to:

- Understand the basic structure and components of a web page.
- Write semantic HTML code to create the structure of a web page.
- Apply CSS styling to enhance the visual presentation of a web page.
- Use JavaScript to add interactivity and functionality to a web page.
- Identify and troubleshoot common issues in web development.
- Demonstrate proficiency in using web development tools and resources.

Course Outline

Week 0: Overview of Web Development

Week 1: Introduction to HTML

- Session 1: Introduction to HTML; basic tags and structure.
- Session 2: Advanced HTML elements (forms, tables, and semantic HTML).

Week 2: Advanced HTML and Introduction to CSS

- Session 3: Completing HTML with embedded media, forms, and new HTML5 elements.
- Session 4: Introduction to CSS; selectors, properties, and basic styling.

Week 3: Styling with CSS

- Session 5: CSS box model, positioning, and flexbox.
- Session 6: Responsive design with CSS grid and media queries.

Week 4: HTML & CSS Practical Project

- Session 7: Project kickoff; students begin creating a complete website using only HTML and CSS.
- Session 8: Continued project work; students apply responsive design principles, focus on layout techniques and styling.
- Assignment 1: Personal Portfolio

Week 5: Introduction to JavaScript

- Session 9: JavaScript basics (variables, functions, data types).
- Session 10: Control structures (loops, conditionals), and DOM basics.

Week 6: Advanced JavaScript

- Session 11: Event handling and advanced DOM manipulation.
- Session 12: Practical Web Application
- Assignment 2: To-Do List

Week 7: Web Accessibility and CSS Frameworks (Bulma)

- Session 13: Principles of web accessibility; implementing accessible web components.
- Session 14: Introduction to CSS framework Bulma; applying Bulma to enhance UI design.
- Assignment 3: Practical Web Design

Week 8: Final Review and Enhancements

- Session 15: Integration of JavaScript to add interactive features to projects.
- Session 16: Final project presentations and course wrap-up.

Assessment

- Quizzes and assignments to reinforce learning objectives
- Final project evaluation based on creativity, functionality and adherence to best practices in web development.

Resources

- Recommended readings and resources for further exploration
- Access to code editors and development environments for practice

Prerequisites

There are no formal prerequisites for this course. However, familiarity with basic computer skills and a willingness to learn are recommended.

Learning Methods:

Video Lectures: Participants will have access to pre-recorded video lectures covering each module's content. These lectures will provide comprehensive explanations of key concepts, accompanied by examples and demonstrations to enhance understanding.

Live Zoom Sessions: Interactive live Zoom sessions will be conducted periodically to supplement the video lectures. During these sessions, participants

will have the opportunity to engage with instructors and peers, ask questions, discuss challenging topics, and receive live demonstrations or walkthroughs of complex concepts.

Interactive Quizzes and Assignments: Participants will be provided with interactive quizzes and assignments to test their understanding of the material covered in the video lectures and Zoom sessions. These quizzes and assignments will reinforce learning and provide opportunities for hands-on practice.

Self-paced Learning: Participants can learn at their own pace, accessing video lectures, quizzes, and assignments at any time convenient for them. However, they are encouraged to adhere to the course schedule to stay on track with their learning objectives.

Supplementary Resources: Additional reading materials, documentation, and tutorials will be provided to supplement the video lectures and further deepen participants' understanding of advanced Python concepts.

Grading Criteria

1. Attendance: 30%
2. Personal Portfolio (assignment 1): 20%
3. To-Do App (assignment 2): 20%
4. Practical Web Design(assignment 3): 30%

Grade	Percentage	Interpretation
A	80-100	Outstanding
B	70-79	Good
C	50-69	Satisfactory
D	0-49	Unsatisfactory

Conclusion

The introduction to Web Development Fundamentals course aims to provide students with a solid foundation in web development, equipping them with the skill and knowledge necessary to pursue further studies or careers in this exciting field. Through hands-on projects and interactive learning experiences, students will gain confidence in their ability to create dynamic and engaging web content.

References

1. <https://www.w3schools.com/html>
2. <https://www.w3schools.com/css>
3. <https://www.w3schools.com/js/>
4. <https://developer.mozilla.org/en-US/docs/Web/CSS/Reference>

Download Video Link

For HTML & CSS: <https://1drv.ms/f/s!AuHTRvctFDh1qJtPKGnuf9chwD5HYw?e=zEp0Qn>

(Video 1-3 is HTML and 4-6 is CSS)

For Javascript:

<https://drive.google.com/drive/folders/1MhCLjllreefru-yhKVbv4em9BX6Ej7BF?usp=sharing>

Download Handbook Link

Javascript for Absolute Beginners:

<https://docs.google.com/document/d/1xsAlyeoK7PznVK8gBJerZrFvcjOdtOQSAZj62CLNH9w>