Introduction to Web Development Course Syllabus

Course Overview

This course provides a comprehensive foundation in web development, covering HTML, CSS, JavaScript, and version control with Git and GitHub. You'll explore essential web concepts such as responsive design, web accessibility, DOM manipulation, and asynchronous programming while also learning advanced styling techniques and collaborative development practices. Additionally, you'll leverage Microsoft Copilot to enhance your coding efficiency across HTML, CSS, and JavaScript, culminating in a small web project that showcases Copilot's capabilities for streamlined development. By the end of this course, you'll be equipped to build interactive, accessible, and responsive web solutions.

Learning Objectives

By the end of this course, you will be able to:

- Define the basic structure and elements of HTML, syntax of CSS and JavaScript, and concepts of version control
- Explain the principles of responsive design, web accessibility, DOM manipulation asynchronous JavaScript, and integration of Git with development tools.
- Describe advanced CSS techniques, functions, and scope in JavaScript, collaborative development with GitHub, and the features of Microsoft Copilot
- Apply HTML, CSS, and JavaScript skills with Microsoft Copilot for a small web project

Module Overview

Module 1: HTML for Web Development

By the end of this module, you will be able to:

- Define the basic structure and elements of HTML
- Explain the role of HTML in web development and its interaction with CSS and JavaScript

- Describe the use of semantic HTML
- Create basic HTML documents
- Construct a simple web page using HTML

Graded Quiz: HTML for Web Development

- For this quiz, you will answer questions based on your knowledge of HTML structure and elements, HTML's role with CSS and JavaScript, using semantic HTML, and building basic HTML documents and web pages.

Module 2: CSS for Web Development

By the end of this module, you will be able to:

- Explain the basic concepts and syntax of CSS
- Describe the principles and techniques of responsive web design
- Identify key web accessibility features and their importance
- Describe advanced CSS techniques for styling and layout
- Design a responsive web page using CSS

Graded Quiz: CSS for Web Development

- For this quiz, you will answer questions based on your knowledge of CSS syntax and concepts, responsive design principles, web accessibility features, advanced styling techniques, and designing responsive web pages with CSS.

Module 3: Introduction to JavaScript for Interactivity

By the end of this module, you will be able to:

- Define the basic syntax and constructs of JavaScript
- Explain how to manipulate the Document Object Model (DOM) using JavaScript
- Describe the concepts of functions and scope in JavaScript

- Explain the principles of asynchronous programming in JavaScript
- Identify advanced JavaScript concepts and techniques
- Describe how to manage data using JSON and JavaScript

Graded Quiz: Introduction to JavaScript for Interactivity

- For this quiz, you will answer questions based on your knowledge of JavaScript syntax, DOM manipulation, functions and scope, asynchronous programming, advanced techniques, and managing data with JSON.

Module 4: Version Control with Git and GitHub

By the end of this module, you will be able to:

- Define the basic concepts of version control
- Explain the basic commands used in Git for version control
- Describe how to use GitHub for collaborative development
- Explain how to integrate Git with development tools and IDEs
- Identify advanced Git techniques for managing repositories

Graded Quiz: Version Control with Git and GitHub

- For this quiz, you will answer questions based on your knowledge of version control concepts, essential Git commands, using GitHub for collaboration, integrating Git with development tools, and advanced repository management techniques.

Module 5: Using Microsoft Copilot for Writing HTML, CSS, and JavaScript

By the end of this module, you will be able to:

- Describe the features and functionalities of Microsoft Copilot for HTML, CSS, and JavaScript development
- Use Microsoft Copilot to write and enhance HTML code

- Use Microsoft Copilot to write and enhance CSS code
- Use Microsoft Copilot to write and enhance JavaScript code
- Apply Microsoft Copilot to develop a small web project using HTML, CSS, and JavaScript

Project: Using Microsoft Copilot for Writing HTML, CSS, and JavaScript

- For this project, you will leverage Microsoft Copilot to develop and enhance a web project using HTML, CSS, and JavaScript. You'll apply your skills in using Copilot to write, refine, and optimize code across all three languages, creating a cohesive web solution. This project will showcase Copilot's capabilities in streamlining code development, enhancing styling and functionality, and supporting effective front-end development practices.