Frontend Development Curriculum

Axia Africa

Executive Summary:

The Frontend Development curriculum aims to equip students with the fundamental skills and knowledge necessary to build modern and responsive web applications. Through a structured approach, students will learn the core concepts of HTML, CSS, and JavaScript, along with popular frameworks and libraries such as Bootstrap and React. By the end of the program, students will have the proficiency to create interactive user interfaces and effectively collaborate in frontend development projects

Learning Objectives

1. Understand the principles of HTML, CSS, and JavaScript.
2. Learn to create responsive web layouts and styles using CSS frameworks like Bootstrap.
3. Gain proficiency in DOM manipulation and event handling with JavaScript.
4. Explore modern JavaScript libraries and frameworks such as React.
5. Develop problem-solving skills and the ability to troubleshoot frontend issues.
6. Collaborate effectively in frontend development projects, including version control with Git.

Learning Activities:

Week	Topics	Student Activity
1	Introduction to HTML and CSS	• Quiz on basic HTML and CSS concepts • Complete HTML and CSS exercises
2	Intermediate CSS and Responsive Design	• Learn about flexbox and grid layouts • Implement responsive designs with media queries • Practice creating layouts for different screen sizes
3	Introduction to JavaScript	• Understand JavaScript basics and syntax • Complete JavaScript exercises • Quiz on JavaScript fundamentals
4	DOM Manipulation and Event Handling	• Practice manipulating the DOM with JavaScript • Implement event listeners and handlers • Implement event listeners and handlers
5	Introduction to Bootstrap and Tailwind CSS	• Create responsive layouts with Bootstrap and Tailwind CSS • Understand the Bootstrap and Tailwind grid system • Complete Bootstrap and Tailwind exercises

Learning Activities:

Week	Topics	Student Activity
6	Advanced CSS Techniques	• Implement animations and transitions with CSS • Practice advanced styling technique
7	Introduction to React	• Understand React components and JSX syntax • Create a simple React application • Complete React exercises
8	React State Management and Hooks	• Learn about state management in React • Implement React hooks for functional components • Final project: Build a small React application