



Excellence Educational Academy

Alipore, Kolkata

[Where TALENT is the keyword]

Sister Concern is



e-DIGITAL LEARNING

AN INSTITUTE FOR MULTIDISCIPLINE TECHNICAL COACHING CLASSES & GUIDANCE
[Founded and Directed by a Renowned Academicians & Corporate Professionals]

Ref. No. : EEA/TTD-WD/IT/2024

Date : 10/11/2024

IT Professional Corporate Training Curriculum for IT/Non-IT Participants

Name of the Corporate Training : **Website Design and Development (Animation)**

Course Duration: 100 Hours

Course Code: TTD-WD

Target Audience: Students, corporate trainees, or professionals interested in developing interactive, animated websites.

Prerequisites: Basic understanding of HTML, CSS, and JavaScript.

Course Outline

Module 1: Introduction to Website Design

- **Topics Covered:**
 - Overview of web design principles
 - Understanding user experience (UX) and user interface (UI)
 - Introduction to HTML5 and CSS3 for layout and styling
- **Milestone 1 Project:**
 - Design a simple static webpage that includes text, images, and basic styling.

Module 2: CSS Layout Techniques and Responsive Design

- **Topics Covered:**
 - CSS Flexbox and Grid for layout design
 - Media queries and responsive design principles

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- Best practices for designing across devices
- **Milestone 2 Project:**
 - Develop a responsive homepage layout using Flexbox or Grid.

Module 3: Introduction to Animation in CSS

- **Topics Covered:**
 - CSS transitions and animations
 - Keyframes and animation timing functions
 - Animating text, images, and background elements
- **Milestone 3 Project:**
 - Create a landing page with basic animations, such as hover effects and text animations.

Module 4: JavaScript Basics for Interactive Websites

- **Topics Covered:**
 - Introduction to JavaScript syntax and DOM manipulation
 - Event listeners and handling user interactions
 - Basics of vanilla JavaScript animations
- **Milestone 4 Project:**
 - Build an interactive gallery page with JavaScript-triggered animations.

Module 5: Advanced CSS Animations

- **Topics Covered:**
 - Advanced keyframe animations
 - CSS animation libraries (e.g., Animate.css)
 - Integrating multiple animations on one page
- **Milestone 5 Project:**
 - Create an animated webpage that showcases advanced animations on buttons, headers, and images.

Module 6: SVG Graphics and Animations

- **Topics Covered:**
 - Introduction to SVG graphics in web design
 - Animating SVG with CSS and JavaScript
 - Creating and importing custom SVG animations
- **Milestone 6 Project:**
 - Add animated SVG icons to a webpage for interactive elements.

Module 7: JavaScript Libraries for Animation

- **Topics Covered:**
 - Introduction to animation libraries (GSAP, Anime.js)
 - Animating elements with GSAP
 - Using scroll-triggered animations with GSAP

- **Milestone 7 Project:**
 - Create a webpage that uses GSAP animations triggered by scroll and hover events.

Module 8: Advanced Interactivity with JavaScript and Animations

- **Topics Covered:**
 - Advanced event handling for animations
 - Using timelines in GSAP for complex animations
 - Parallax scrolling effects and transitions
- **Milestone 8 Project:**
 - Develop a parallax scrolling webpage with multiple interactive elements.

Module 9: Working with Canvas and WebGL for Animation

- **Topics Covered:**
 - Introduction to HTML5 Canvas API
 - Creating basic shapes and animations on Canvas
 - Using Three.js for 3D animations and effects
- **Milestone 9 Project:**
 - Create an interactive banner with animated graphics on Canvas or Three.js.

Module 10: Building Interactive Forms and Modals

- **Topics Covered:**
 - Designing interactive forms with animations
 - Creating and animating modals and pop-ups
 - Validating form inputs with JavaScript
- **Milestone 10 Project:**
 - Build an animated contact form and modal for a portfolio site.

Module 11: Animating Data Visualizations

- **Topics Covered:**
 - Using chart libraries (Chart.js, D3.js)
 - Animating charts and graphs
 - Displaying animated data on web dashboards
- **Milestone 11 Project:**
 - Design an animated dashboard with dynamic data visualization.

Module 12 Final Project Development and Deployment

- **Topics Covered:**
 - Planning and structuring a fully animated website
 - Optimizing animations for performance
 - Deploying websites with animations (GitHub Pages, Netlify, Vercel)
- **Final Project:**

- Build a fully animated website that showcases learned animation techniques, such as a portfolio or an interactive landing page for a product or service.

Assessment and Evaluation

- Milestone Projects: 60% of final grade
- Final Project: 30% of final grade
- Participation and Attendance: 10% of final grade

Resources

- Recommended Books:
 - "CSS Animations and Transitions for the Modern Web" by Steven Bradley
 - "JavaScript and JQuery: Interactive Front-End Web Development" by Jon Duckett
- Online Platforms:
 - Mozilla Developer Network (MDN)
 - [CodePen](https://codepen.io) for animation practice

Course Delivery

- Method: Blended learning (theory and practical)
- Format: Lectures, hands-on coding sessions, and project work