

<b>CS3206</b>	<b>Title : Front End Development-II</b>	<b>L T P C</b> <b>2 0 0 2</b>
<b>Version No:</b>	1.0	
<b>Objective</b>	After learning HTML5, CSS3, and Bootstrap 5, students will create responsive, modern websites, effectively utilizing web design principles and frameworks.	
<b>Course Outcomes</b>	<p>Students will be able to:</p> <p>CO1: Develop responsive web pages using modern UI/UX principles and front-end development best practices.</p> <p>CO2: Construct responsive and visually appealing web interfaces utilizing Bootstrap's grid system and components.</p> <p>CO3: Implement advanced JavaScript features and asynchronous programming techniques to build dynamic web applications.</p> <p>CO4: Design and build interactive user interfaces using React components, state, and props.</p> <p>CO5: Develop and manage complex React applications incorporating routing, state management, and component styling, while ensuring code quality through testing.</p>	
<b>Unit No</b>	<b>Unit Title</b>	<b>No. of Hrs (Per Unit)</b>
<b>Unit 1</b>	<b>Introduction to Front End Development and Bootstrap Basics</b>	<b>5</b>
<p>HTML &amp; CSS Revisited, Responsive Web Design Principles, Introduction to Bootstrap: An overview of Bootstrap framework, its features, and advantages in front-end development.</p> <p>Bootstrap Grid System: Understanding the responsive grid system of Bootstrap for layout design and development.</p> <p>Bootstrap Components: Exploring various Bootstrap components such as buttons, forms, navigation bars, and cards for building user interfaces efficiently.</p> <p>Customizing Bootstrap: How to customize Bootstrap themes, colors, and components to match the design requirements of a project.</p> <p><b>Project:</b> E-commerce Product Page</p>		
<b>Unit-2</b>	<b>Advance JS</b>	<b>7</b>
<p>Advance JS: ES6 Concepts (Classes, Arrow Functions, Variables, array methods, destructuring, Spread operator, modules, Ternary Operator) and its importance.</p> <p>DOM: Introduction to DOM, Accessing Elements of HTML using Dom, Various functions for handling DOM, Event Handling, ways of handling the events, Dynamic handling of DOM Elements, Dynamic Creation of different elements of DOM.</p> <p>Async Programming Introduction and its usage, JavaScript methods to perform background tasks, Timeout and Interval, Async and await, Promises and handling promises, Callback and exceptions.</p> <p><b>Project:</b> Weather App</p>		
<b>Unit-3</b>	<b>Version Control and API Basics</b>	<b>5</b>
<p>Introduction to Version Control, Version control using Git and command line, GitHub and remote repository, GitIgnore, GitCloning, Branching and Merging, Forking and Pull request, Introduction to APIs, Structuring API Request, JSON, Making Server-side API request (using Axios or Fetch), API Authentication, RestFul APIs</p> <p><b>Project:</b> Use a Public API</p>		
<b>Unit-4</b>	<b>Basics of ReactJS</b>	<b>5</b>
<p>Introduction to React: Overview of React library, its features, and advantages for building interactive user interfaces.</p> <p>Introduction to JSX and Babel, JSX attributes and Styling React</p> <p>React Components: Understanding the component-based architecture of React and creating functional and class components.</p>		

<p>State and Props: Exploring state and props in React components for managing data and communication between components.  React Hooks: useState, useEffect, useReducer  Lifecycle Methods: Understanding React component lifecycle methods and their usage for handling component initialization, updates, and unmounting.  <b>Project:</b> Keeper App part-1 Challenge and Solution</p>		
<b>Unit-5</b>	<b>Building Application with ReactJS</b>	<b>5</b>
<p>React Router: Implementing client-side routing in React applications using React Router for navigation and managing application URLs.  Managing Application State: Introduction to state management in React applications using React Context API or external libraries like Redux.  Component Styling: Exploring different approaches for styling React components, including inline styles, CSS modules, and styled-components.  Testing React Applications: Introduction to testing React components using tools like Jest and React Testing Library for ensuring code quality and reliability.  <b>Project:</b> Keeper App part- 2 &amp; 3</p>		
<b>Text Books</b>	<ol style="list-style-type: none"> <li>Head First HTML and CSS – Elisabeth Robson &amp; Eric Freeman</li> <li>Web Design Playground: HTML &amp; CSS the Interactive Way – Paul McFedries</li> </ol>	
<b>Reference Books</b>	<ol style="list-style-type: none"> <li>Interactive Front-End Web Development by Jon Duckett</li> </ol>	
<b>Mode of Evaluation</b>	Continuous Internal and End Semester Examination	
<b>Recommended by Board of Studies on</b>	31-05-2024	
<b>Date of publication after approval in the Academic Council</b>	15-06-2024	