



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)



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WEEKLY LESSON PLAN

Department: Computer Science and Engineering

Year / Semester: 2025-26 / Winter

Course Code / Course Name: 10213CS224 / Full Stack Application Development

Unit I: Database Management and Web Development basics Course Outcome: • Understand and use database queries and web technologies to build interactive applications.				
Week	Session	Topics to be Covered	Problems to Practice (Hands-On)	Resources
Week 3	Session 11	Basic and HTML 5 tags	<ol style="list-style-type: none">1. Design a web interface featuring multiple layout configurations with semantic tags, including grid-based and fixed-sidebar templates.2. Develop a content-driven blog platform integrated with media playback controls, video streaming capabilities and audio controls for an enhanced user experience.3. Develop a user interface for an e-commerce platform featuring advanced filtering capabilities, including price range, color palette, brand selection, and customer ratings.	MDN HTML Link W3Schools HTML5 Link
	Session 12	Design HTML Forms,	<ol style="list-style-type: none">1. Design a sign-in and sign-up interfaces, with standardized form schemas with necessary aria labels.	https://web.dev/learn/forms

		<p>Handling user inputs with form validations</p>	<p>2. Design a professional registration form for a “tantraz” with the following requirements:</p> <p>Text input: for "full name."</p> <p>Email input: using the correct type for automatic browser validation.</p> <p>Dropdown (select): to choose a "participation category" (e.g., individual, team, audience).</p> <p>Radio buttons: to select "t-shirt size" (s, m, l, xl).</p> <p>Checkboxes: to select "technical interests" (e.g., ai, web dev, cloud computing).</p> <p>Textarea: for a brief "expectations" or "suggestions"</p> <p>3. User input handling & validation Implement the following constraints in the above registration form:</p> <p>Mandatory fields: name, email, and category must use the required attribute.</p> <p>Character limits: the biography should have a maxlength of 200 characters.</p> <p>Placeholder text: provide helpful hints within the inputs</p>	
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	Session 13	CSS	Apply the fluid-responsive design principles using CSS Media Queries and Flexible Grid Systems (Flexbox or CSS Grid) to ensure the webpage dynamically adapts to varying viewport dimensions and device breakpoints.	https://web.dev/learn/css
	Session 14	JavaScript for Dynamic Web - ES6 features - DOM manipulation	<ol style="list-style-type: none"> 1. Implement a state-management script using ES6 block-scoped variables (let and const) to update the score of a match. 2. Create an arrow function named generateReceipt that takes price and tip. It should calculate the total and print a message using Template Literals. 3. Use ES6 to extract specific properties from a complex object and elements from an array without using traditional dot notation or index numbers. (Hint: Use Object and Array Destructuring) 4. Create a partyList welcome list using Spread and Merge operators(...) <ol style="list-style-type: none"> i. Create 2 lists (array) of friends called collegeFriends and workFriends. Merge both list to prepare partyList using the SPREAD operator. Add one more name, "Me", at the very start of the partyList. ii. Write a function to receive a normal parameter and a REST operator to catch all other items. 	https://javascript.info/

			5. Create a JavaScript program that uses a Promise to simulate a pizza ordering system.	
	Session 15	JavaScript: Keyboard and Mouse Event Handling	1. Design a screen object (A square box / Circle) and program its spatial movement across the DOM using global keyboard listeners. 2. Design a blank webpage to monitor the MouseMoveEvents across the global viewport. Implement logic to segment the screen into quadrants and update the document background color based on the cursor's current coordinate.	https://javascript.info/events