



Program	BACHELOR OF VOCATION (B.Voc.)	Semester - 3
Type of Course	-	
Prerequisite		
Rationale	-	
Effective From A.Y.	2024-25	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				SEE T	IAT	SEE P	CCE	
-	-	2	1	-	-	30	20	50

SEE - Semester End Examination, IAT - Internal Assessment Test, CCE - Continues & Comprehensive Evaluation

Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
1	Practical 1 Build a single responsive HTML page with a stylesheet that demonstrates: external vs. internal CSS, selectors, and a media query that changes layout below 600 px width	2	
2	Practical 2 Create an HTML page with a button; on click use JS to (a) show an alert(), (b) log a message and a JS object to the console, and (c) catch and handle a deliberate error (e.g. undefinedFunction())	2	
3	Practical 3 Use JS to select elements by ID/class and change their background and text color on hover. Add error handling if the selector returns null	2	
4	Practical 4 Scaffold a minimal AngularJS app that defines one module and one controller. Bind an input box and a button so the user can add items to a list displayed via ng-repeat	2	
5	Practical 5 Create a registration form (name, email, password). Use AngularJS built in validators and show custom error messages. Prevent submission until all fields are valid	4	
6	Practical 6 Extend your AngularJS "To Do" into a two view SPA using ngRoute: one view to list tasks, another to display "About" info. Include links to navigate without page reload	4	
7	Practical 7 Write a Node.js script that spins up an HTTP server on port 3000 and responds with "Hello, World!" to every request. Log request method and URL to console	2	
8	Practical 8 In Node.js, read a large text file asynchronously, count its lines, and print the result. Use events/timers to log progress every 500 ms during read	4	



Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
9	Practical 9 Using Node.js + Express, build CRUD endpoints (GET/POST/PUT/DELETE) for an in memory “users” collection. Test via Postman or curl	4	
10	Practical 10 Connect Node.js to MongoDB. Build a small CLI or web app that can Insert, Find, Update, and Delete “product” documents. Include error handling for connection failures	4	
Total		30	

Course Outcomes	
At the end of this course, students will be able to:	
C01	Demonstrate proficiency in JavaScript and CSS, including responsive design, Bootstrap, DOM manipulation, and asynchronous programming
C02	Apply fundamental AngularJS concepts to develop structured and modular single-page web applications using MVC architecture and routing
C03	Develop dynamic web applications using advanced AngularJS features such as custom modules, directives, data binding, and form validation
C04	Set up and configure a Node.js environment, utilize Node’s package manager, and apply basic event-driven and asynchronous programming concepts, build scalable and robust backend applications using advanced Node.js features including file system operations, networking, REST APIs, and session management
C05	Implement database operations using MongoDB and Node.js to create full-stack applications with CRUD functionality and seamless data connectivity

Reference Books	
1.	Angularjs in Action By Ruebbelke Wiley Publication
2.	Node.js in Action By Alex Young Dreamtech Press
3.	Professional Node.js By Pedro Teixeira John Wiley & Sons
4.	Node.Js in Practice By Alex Young, Marc Harter, Ben Noordhuis Wiley Publication
5.	Pro AngularJS By Freeman Apress Publication

Laboratory work will be based on above syllabus with minimum required experiments/exercises to be incorporated.