



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	
3	-	-	3	50	-	-	-	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	Refreshing Java Script and CSS CSS syntax, Benefits, Responsive design, Bootstrap introduction, JavaScript syntax, JavaScript inbuilt objects, Error handling and event handling, DOM, Asynchronous programming	6	15
2	Introduction to Angular JS Basics and syntax of Angular JS, Features, Advantages, Application structure, Basics of routes and navigation, MVC with Angular JS, Services	9	20
3	Angular JS in Detail Modules, Directives, Routes, Angular JS forms and validations, Data binding	6	15
4	Node JS Set up Node JS environment, Package manager, Features, Console object, Concept of callbacks, Events and event loop, Timers, Error handling, Work with file system, Debugging, Node JS REST API, Sessions and cookies	12	25
5	Database Programming with Node JS and MongoDB Basics of MongoDB, Data types, Connect Node JS with MongoDB, Operations on data (Insert, Find, Query, Sort, Delete, Update) using Node JS	12	25
Total		45	100

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy			
Level	Remembrance	Understanding	Application
Weightage	10	20	20

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

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