Department: *Computer Science and Engineering*	Course Type: *Programme Elective*
Course Title: *Advanced Web Programming-1*	Course Code: *18CSE536*
L-T-P:*2-0-2*	Credits:*03*
Total Contact Hours: *39 Hours*	Duration of SEE*: 3 Hours*
SEE Marks: *50*	CIE Marks: *50*

COURSE DESCRIPTION

The focus in this course is on the Advance Web concepts as a platform for interactive applications. The development of web-based applications requires knowledge about the underlying technology and the formats and standards the web is based upon. This course includes advance concepts like Node.JS and vue.js.

PREREQUISITES

- Student should have prior knowledge of HTML tags and Cascading Style sheets.
- Students should be able to develop a dynamic webpage by the use of Java Script and server side scripts using PHP and Angular js .
- Student should know how to connect the scripting language with database.

COURSE OBJECTIVES

- To learn the fundamentals of Node.js as well as a pragmatic approach to making web applications.
- To learn the concepts of vue.js which is current scripting programming in developing front end applications

COURSE CONTENTS

UNIT-I   **08 Hours**
NODE.JS
Introduction to Node.js, Getting Started with Node.js, Using Events, Listeners, Timers, and Call backs in Node.js, Handling Data I/O in Node.js, Accessing the File System from Node.js, Implementing HTTP Services in Node.js,

UNIT - II   **08 Hours**
NODE.JS with MongoDB Implementing Socket Services in Node.js. Scaling Applications Using Multiple Processors in Node.js, Getting Started with MongoDB and Node.js, Manipulating MongoDB Documents from Node.js, Accessing MongoDB from Node.js, Building web application using Node.js and Mongo DB.

UNIT –III   **08 Hours**
vue.js
Introduction toVue.js, first basic examples, Fundamentals: Installing and Using, explains the behind the scenes of Vue.js, provides theoretical insights in to the architectural pattern, touches

nearly all the main Vue.js concepts, Components of vue.js: Understanding and Using , goes deep into components and explains how to rewrite applications using a simple component system and single-file components

UNIT -IV   08 Hours

vue.js
Reactivity–Binding Data to You Application, contains a detailed explanations other usage of data binding mechanisms in Vue.js, Vuex–Managing State in Your Application, contains detailed introduction to Vuex, a state management system or Vue.js, and explains how to use it in your application in order to achieve a nice, maintainable architecture.

UNIT -V   0 7 Hours

vue.js Deploying–Time to GoLive!, show to bring your Vue application to the world ,guarantee in gits quality with continuous integration tools. It explains how to connect a GitHub repository to the Travis continuous integration system and to the Heroku cloud deployment platform, Solutions to Exercises

TEXT BOOKS

1. Brad Dayley, Brendan Dayley, Caleb Dayley, "Node.js, MongoDB and Angular Web Development" , 2nd Edition, Addison Wesley publications, 2018.
2. "Learning vue.js 2" Learn how to build amazing and complex reactive web applications by Packt Publishing Ltd 2016.

REFERENCE BOOKS

1.   M.Dietel, P. Jdeital, A.B. GoldBerg, "Internet & World Wide Web How to Program", 5th Edition, Pearson Education, 2009.
2.   "Learning vue.js" free unaffiliated eBook created from stack overflow contributers.
3. "pro react 16" by Adam freeman published by Apress
Other Sources
- W3Schools online Web Tutorials. Available online: https://www.w3schools.com
- Web Development Technologies Tutorials. Available online: https://www.tutorialspoint.com/vuejs/index.htm

TEACHING METHODS

- Lecture (Power Point presentations/ Black board teaching (if needed))
- Regular review of students by asking questions based on topics covered in the class Programming Assignments

ASSESSMENT METHODS

Parameter	Marks
Three Internals (Average of best of two test)	30
Rubrics evaluation for the Course Project	10
Programming Assignment	10
Total	**50**
Final Exam will be conducted for 100 marks (SEE)	

COURSE OUTCOMES

At the end of the course student will be able to

COs	Description	Bloom's Level
CO 1	Describe the fundamentals of Node.js as well as a pragmatic approach to making web applications.	**L1**
CO 2	Build a web Application using Node.js and MongoDB.	**L3**
CO 3	Apply the basic concepts of vue.js with basic Applications and components of vue.js	**L3**
CO 4	Understand the concepts of reactivity to bind the data to applications.	**L2**
CO 5	Develop the Applications using Vue.Js	**L3**

3: Strong, 2: Medium, 1: Weak ** H: Highly related S: Supportive

Mapping of Course outcomes (COs) to Program outcomes (POs*)& PSO **															
Course Outcomes mapping to Program Outcomes													PSOs		
POs COs	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
CO1	3	2	2		2								2	2	
CO2	3	2	2		2								2	2	
CO3	3	2	2		2								2	2	
CO4	3	2	2		2								2	2	
CO5	3	2	2		2					2	1	1	2	2	1