SRI VENKATESWARA COLLEGE OF ENGINEERING

COURSE DELIVERY PLAN - THEORY

Department of Information Technology			LP: CS16016 Rev. No: 00 Date: 17/12/2018
B.E/B.Tech	: CS & IT	Regulation: 2016	
Sub. Code / Sub. Name: CS16016, User Interface Technologies			
Unit	: I		

Unit Syllabus: INTRODUCTION TO NOSQL DATABASE - MONGODB

What is NoSQL Database - Why to Use MongoDB - Difference between MongoDB& RDBMS - Download & Installation - Common Terms in MongoDB – Implementation of Basic CRUD Operations using MongoDB

Objective:

- To understand and practice NoSQLDatabase
- To understand and practice MongoDB Database

Session No *	Topics to be covered	Ref	Teaching Aids
1	What is NoSQL Database	Internet	LCD
2	Why to Use MongoDB	R4-Ch.1:Pg. No.3-4	LCD
3	Difference between MongoDB& RDBMS	Internet	LCD
4	Download & Installation	R4-A:Pg. No. 385-389	LCD
5	Common Terms in MongoDB	https://www.w3adda.com/mongodb-tutorial/mongodb-terminology	LCD
6	Implementation of Basic CRUD Operations using MongoDB Create, read operations.	R4-Ch.2:Pg. No.14-16, Ch.3:Pg. No.29-52	LCD
7	Implementation of Basic CRUD Operations using MongoDB Update and Delete operations	R4-Ch.2:Pg. No.14-16, Ch.3:Pg. No.29-52	LCD
Content beyond syllabus covered (if any):			

* Session duration: 50 minutes

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Sub. Code / Sub. Name: CS16016, User Interface Technologies

Unit : II

Unit Syllabus: INTRODUCTION TO SERVER-SIDE JS FRAMEWORK – NODE.JS

Introduction - What is Node JS – Architecture – Feature of Node JS - Installation and setup - Creating web servers with HTTP (Request & Response) – Event Handling - GET & POST implementation - Connect to NoSQL Database using Node JS – Implementation CRUD operations.

Objective:

- To understand and practice Server-side JS Framework

Session No *	Topics to be covered	Ref	Teaching Aids
8	Introduction	R3-Ch.1:Pg. No.7-9	LCD
9	What is Node JS	R3-Ch.1:Pg. No.9-10	LCD
10	Architecture	T2-Ch.1:Pg. No.1-3	LCD
11	Feature of Node JS	R3-Ch.1:Pg. No.10-23	LCD
12	Installation and setup	T2-Ch.1:Pg. No.3-10	LCD
13	Creating web servers with HTTP (Request & Response)	T2-Ch.1:Pg. No.10-14	LCD
14	Event Handling	https://www.w3schools.com/nodejs/nodejs_events.asp	LCD
15	GET & POST implementation	R3-Ch.3:Pg. No.67-72	LCD
16	Connect to NoSQL Database using Node JS	T2-Ch.9:Pg. No.69-72	LCD
17	Implementation CRUD operations.	R4-Ch.2:Pg. No.14-16, Ch.3:Pg. No.29-52	LCD

Content beyond syllabus covered (if any):

* Session duration: 50 mins

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Sub. Code / Sub. Name: CS16016, User Interface Technologies

Unit : III

Unit Syllabus: INTRODUCTION TO TYPESCRIPT

TypeScript : Introduction to TypeScript – Features of TypeScript – Installation setup – Variables – Datatypes – Enum – Array – Tuples – Functions – OOP concepts – Interfaces – Generics – Modules – Namespaces – Decorators – Compiler options – Project Configuration

Objective:

- To understand the concepts and need of TypeScript

Session No *	Topics to be covered	Ref	Teaching Aids
18	Introduction to TypeScript	R1-Ch.1:Pg. No.1-4	LCD
19	Features of TypeScript	R1-Ch.1:Pg. No. 5-11	LCD
20	Installation setup	R1-Ch.1:Pg. No. 12-34	LCD
21	Variables, Datatypes, Enum – Array – Tuples	R1-Ch.2:Pg. No. 35-46	LCD
22	Functions	R1-Ch.2:Pg. No. 47-62	LCD
23	OOP concepts	R1-Ch.8:Pg. No. 235-269	LCD
24	Interfaces	R1-Ch.3:Pg. No. 63-86	LCD
25	Generics	R1-Ch.3:Pg. No. 87-105	LCD
26	Modules	R1-Ch.4:Pg. No. 107-122	LCD
27	Namespaces	R1-Ch.3:Pg. No. 123-130	LCD
28	Decorators	https://www.typescriptlang.org/docs/handbook/decorators.html	LCD
29	Compiler options – Project Configuration	https://www.typescriptlang.org/docs/handbook/compiler-options.html	LCD

Content beyond syllabus covered (if any):

* Session duration: 50 mins

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Sub. Code / Sub. Name: CS16016, User Interface Technologies

Unit : IV

Unit Syllabus: INTRODUCTION TO CLIENT-SIDE JS FRAMEWORK – BASICS OF ANGULAR 4.0

Introduction to Angular 4.0 - Needs & Evolution – Features – Setup and Configuration – Components and Modules – Templates – Change Detection – Directives – Data Binding - Pipes – Nested Components

Objective:

- To understand and practice Client-side JS Framework, Basics of ANGULAR 4.0

Session No *	Topics to be covered	Ref	Teaching Aids
30	Introduction to Angular 4.0	https://angular.io/guide/architecture	LCD
31	Needs & Evolution, Features	https://angular.io/features, https://codeburst.io/angular-evolution-7ae670ca7932	LCD
32	Setup and Configuration	https://w3lessons.info/2017/08/08/angular-4-0-installation-and-setup-in-local-environment/	LCD
33	Components and Modules	https://angular.io/guide/architecture-components	LCD
34	Templates	https://angular.io/guide/template-syntax	LCD
35	Change Detection	https://angular.io/api/core/ChangeDetectorRef	LCD
36	Directives	https://angular.io/guide/attribute-directives, https://www.tutorialspoint.com/angular4/angular4_directives.htm	LCD
37	Data Binding	https://www.tutorialspoint.com/angular4/angular4_data_binding.htm, https://alligator.io/angular/data-binding-angular/	LCD
38	Pipes, Nested Components	https://codecraft.tv/courses/angular/quickstart/nesting-components-and-inputs/	LCD

Content beyond syllabus covered (if any):

* Session duration: 50 mins

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COURSE DELIVERY PLAN - THEORY

Sub. Code / Sub. Name: CS16016, User Interface Technologies

Unit : V

Unit Syllabus: INTRODUCTION TO CLIENT-SIDE JS FRAMEWORK – FORMS AND ROUTING IN ANGULAR 4.0

Template Driven Forms - Model Driven Forms or Reactive Forms - Custom Validators - Dependency Injection - Services - RxJS Observables - HTTP - Routing

Objective:

- To understand and practice Client-side JS Framework, Basics of ANGULAR 4.0

Session No *	Topics to be covered	Ref	Teaching Aids
39	Template Driven Forms	https://angular.io/guide/forms, https://codecraft.tv/courses/angular/forms/template-driven/	LCD
40	Model Driven Forms or Reactive Forms	https://codecraft.tv/courses/angular/forms/model-driven/, https://angular.io/guide/reactive-forms	LCD
41	Custom Validators	https://alligator.io/angular/reactive-forms-custom-validator/, https://angular.io/guide/form-validation	LCD
42	Dependency Injection	https://angular.io/guide/dependency-injection, https://codecraft.tv/courses/angular/dependency-injection-and-providers/overview/	LCD
43	Services	https://angular.io/tutorial/toh-pt4, https://www.tutorialspoint.com/angular4/angular4_services.htm	LCD
44	RxJS Observables	https://angular.io/guide/rx-library, https://codecraft.tv/courses/angular/http/http-with-observables/	LCD
45	HTTP, Routing	https://angular.io/guide/router, https://codecraft.tv/courses/angular/routing/route-configuration/	LCD
Content beyond syllabus covered (if any):			

* Session duration: 50 mins

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TEXT BOOKS:

1. Nate Murray, Felipe Coury, Ari Lerner and Carlos Taborda, "ng-book, The Complete Book on Angular 4", First Edition, CREATESPACE Publishers, 2017.
2. Krasimir Tsonev, "Node.js by Example", Packt Publishing, 2015

REFERENCES :

1. Nathan Rozentals, "Mastering TypeScript", Second Edition, Packt Publishing, 2017.
2. Amol Nayak, "MongoDB Cookbook " , Second Edition, Packt Publishing, 2016
3. Sandro Pasquali, "Mastering Node.js", First Edition, Packt Publishing,2013.
4. Kristina Chodorow, "MongoDB : The Definitive Guide", Second Edition, O' Reilly Publications, 2013.
5. Matt Frisbie, "Angular 2 Cookbook", First Edition, Packt Publishing, 2017.

	Prepared by	Approved by
Signature	17/12/18	17/12/18
Name	Ms. N. Uma	Dr. V. Vidhya
Designation	Assistant Professor	Professor and Head
Date	17/12/2018	17/12/2018
Remarks *:		
Remarks *:		

* If the same lesson plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD