Course: 202: Front-End Technologies

Course Code	**202**
Course Title	**Front-end Technologies**
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Review / Revision	June 2020
Purpose of Course	To understand the concepts of HTML, CSS, Front-end Scripting technologies
Course Objective	To teach the concepts of Front-end Scripting and its practical applications.
Course Outcome	CO1 : Explain students the insight of the fundamental aspects of the static web technology like HTMl , CSS and Javascript CO2 : Train students to represent declarative knowledge in the Boorstrap and it's components , with help of this students can learn static web designing . CO3 : Train students to understand various Javascript based technologies like Jquery , JSON and AJAX. CO4 : Explain and train students to understand basic concepts of Angular JS. CO5 : Expose the students to the various UI technology and real world use of it.. CO6 : After completion of this course, the student will be able to design and develop web pages and Interactive UI for Web Applications

Mapping between COs with PSOs

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	▓							
CO2	▓		▓					
CO3	▓	▓	▓		▓			
CO4		▓	▓	▓		▓	▓	▓
CO5	▓		▓		▓			
CO6	▓	▓	▓			▓	▓	▓

Pre-requisite	Basic concepts of HTML, Web & Programming skills

Course Content	**Unit 1: Fundamentals of Web Technology**
	1.1 HTML
	    1.1.1 Basic HTML tags
	    1.1.2 HTML Forms
	1.2 HTML5
	    1.2.1 HTML5 new elements
	    1.2.2 HTML5 Form elements
	    1.2.3 HTML5 Attributes
	    1.2.4 Canvas
	    1.2.5 Video and Audio
	    1.2.6 Web storage
	    1.2.7 Geolocation
	    1.2.8 HTML 5 APIs
	1.3 CSS3
	    1.3.1 Introduction to CSS3
	    1.3.2 Selectors and Classes
	    1.3.3 Font and Text effect
	    1.3.4 Colors, Gradients, Background Images, and Masks
	    1.3.5 Border and Box effects etc.
	    1.3.6 Embedding Media
	1.4 JavaScript
	    1.4.1 Fundamentals of JavaScript
	    1.4.2 Syntax of JavaScript
	    1.4.3 Use of JavaScript in HTML
	    1.4.4 Validation using JavaScript
	    1.4.5 DOM
	
	Unit 2: Introduction to Bootstrap
	2.1 What is Bootstrap

2.1.1 What is Responsive web page
2.1.2 Advantages and features of Bootstrap
2.1.3 Setup Environment
2.1.4 Apply bootstrap to Application
2.2 Bootstrap with CSS
    2.2.1 Grid system
    2.2.2 Typography
    2.2.3 Code, table, forms, buttons, image, responsive utilities etc.
2.3 Bootstrap components
    2.3.1 What is Bootstrap components
    2.3.2 Advantages of components
    2.3.3 Types of Bootstrap components
        2.3.3.1 Glyphicons, Drop downs, button group, input groups
            navigation, pagination etc.

Unit 3: JQuery
3.1 Introduction to JQuery
    3.1.1 Syntax, Attributes, Selectors, Events
3.2 JQuery Effects
    3.2.1 Hide/Show, Fade, Slide, Animation etc.
    3.2.2 JQuery with HTML
3.3 Traversing
3.4 JQuery and AJAX

Unit 4: AJAX and JSON
4.1 Ajax Basics
    4.1.1 HTTP Request and Response Fundamentals
    4.1.2 The XMLHttpRequest Object XMLHttpRequest Methods
    4.1.3 XMLHttpRequest Properties
    4.1.4 Cross-Browser Usage Sending a Request to the Server
    4.1.5 Server-Side Processing Expanding and Contracting Content
    4.1.6 Form Validation
    4.1.7 Ajax-Based Database Querying using any one server site scripting
        language
4.2 JSON
    4.2.1 JSON Basics
    4.2.2 Syntax
    4.2.3 Datatype, Parse, Stringify, Objects, Array
    4.2.4 Use of JSON using any one server site scripting

Unit 5: Introduction to Angular JS
5.1 Introduction to AngularJS
5.2 Directives, Expressions, Controllers, Filters, Tables, Html DOM
5.3 Modules, Forms, Includes, Views
5.4 Angular SQL
5.5 AngularJS Applications

Reference Books	1. Responsive Web Design with HTML5 and CSS3 By Ben Frain - Packt Publishing Ltd. 2. HTML, CSS & JavaScript Web Publishing in One Hour a Day, Sams Teach Yourself by Laura Lemay, Rafe Colburn, Jennifer Kyrnin – Sams Publication 3. Training Guide Programming in HTML5 with JavaScript and CSS3 (MCSD): 70-480 by Glenn Johnson - Pearson Education 4. Learning Bootstrap by Aravind Shenoy, Ulrich Sossou - Packt Publishing Ltd. 5. Professional AngularJS by Valeri Karpov, Diego Netto - John Wiley & Sons 6. Ajax: Creating Web Pages with Asynchronous JavaScript and XML - Edmond Woychowsky - Prentice Hall

Teaching Methodology	Class work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	30 % internal assessment and 70% external assessment