

A. Course Handout Updated on 06<sup>th</sup> June, 2022

Institute/School/College Name	Chitkara University Institute of Engineering & Technology		
Department/Centre Name	Department of Computer Science & Engineering		
Programme Name	Bachelor of Engineering (B.E.)-Computer Science & Engineering		
Course Name	Front end engineering	Session	2022-2023
Course Code	CS186	Semester/Batch	5 <sup>th</sup> /CSE 2020
Lecture/Tutorial (Per Week)	0-0-8	Course Credit	04
Course Coordinator Name	Dr. Susheela Hooda		

1. Scope and Objectives of the Course

This course covers all the emerging Web Technologies which are used by major private and public organization. The main objectives of the course are:

- To provide knowledge of Front-End Technologies like Advance JavaScript concepts, JQuery and React js to enable students to build user friendly websites.
- To provide the required skills and project-based experience needed for entry into web design and development careers.
- To provide knowledge of variety of strategies and tools to create well-designed websites.

2. Course Learning Outcomes

After completion of the course, students will be able to do the following:

**CLO01:** Understand the JavaScript advance concepts, JQuery, AJAX and ReactJS to develop web pages and retrieve data from the server.

**CLO02:** Apply different attributes to change the layout and position of elements on web pages.

**CLO03:** Analyse the dynamic changes and responses using advanced web concepts.

**CLO04:** Design the minor project and generate report using Front End Technologies.

## CLO-PO mapping grid

Course Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CLO1	H	M					L					
CLO2	H		M		L							
CLO3	M		H									
CLO4			H		L							H

3. Recommended Books (Reference Books/Text Books):

**RB1:** 'Learning web designing: a beginner's guide to HTML, CSS, JavaScript, and web graphics' by Niederst Robbins, 4th Edition, Oreilly Publication, 2012

**RB2:** 'JQuery In Action' by De Rosa, Aurelio, et al. United States, Manning Publications, 2015.

**RB3:** 'React JS Fundamental: Learn fundamental React JS Single Page Application with Fetching Data from API and useContext', Onesinus Saut Parulian, 2019.

**RB4:** 'React. Js Book: Learning React JavaScript Library from Scratch' by Sidelnikov, Greg., Independently Published, 2017.

**4. Other readings & relevant websites:**

S.No	Link of Journals, Magazines, Websites and Research Papers
1	<a href="https://www.w3schools.com/jquery/">https://www.w3schools.com/jquery/</a>
2	<a href="https://www.javascript.com/">https://www.javascript.com/</a>
3	<a href="https://reactjs.org/">https://reactjs.org/</a>
4	<a href="https://www.ics.uci.edu/~goodrich/teach/cs161/notes/">https://www.ics.uci.edu/~goodrich/teach/cs161/notes/</a>

**5. Recommended tools and platform**

HTML,CSS,reactjs,

**6. Lab Plan**

Lecture Number	Topics	Recommended Books
1-2	Introduction to web Development: HTML,CSS	RB1
3-5	Java script ,Boot strap,Jquery ,Canvas,AJAX and API,React JS	RB1
6-8	Sockets Chat application GIT and GitHub AWS	RB1
9-11	Components of Web Page	RB1
12-14	Web pages Web sites Web servers, Search engines	RB1, RB2
15-17	Server Side Frame works	RB1, RB2
18-20	Java Spring,play jboss Node JS , PHP, Python	RB1
21-22	CSS Basic BOX Model, Style CSS CSS Level 1CSS Level2	RB1
23-24	Fixed Nav Barm, Font propertiesposition	RB1, RB2
25-27	Visual Studio code, Responsive Nav BarAssets Transitions	RB1
28-30	Developer mozilla org, Transform Assignment 2 Responsive Page	RB1, RB2
31-33	Animation, Animation1Animation2, Animation3	RB1
34-36	Github.com, Cascading style sheet	RB1, RB2
38-39	Bootstrap, Getbootstrap and JS and Bundle	RB1
40-42	3D Rotating Object, CSS custom Properties Math and Random Function	RB2
43-45	Repeating Stringfunctions, Java script functions	RB3
46-48	Prototypes, Java script style guide	RB2
49-51	Asynchronous Programming, Call backHell	RB2
52-53	Event Listing Document object, Model, Web API	RB2
54-55	Canvas chitkara web, Development, The Postmant app	RB2
56-58	AJAX Node JS org ExpressJs.com EJS Templates JQuery Mongoose JS E-COMMERCE V1,V2, Outline buttons Cookies Passport local mongoose Sockets,jquery Git and Git hub Cloud computing on AWS Elastic bean stack, React APP	RB2,RB3
59-60	Node Js, Require a dirNpmjs.com Application, Views, Applications Models ,products, shopping cart,unsplash.com routes, React forms	RB3, RB4

7. Delivery/Instructional Resources

Lecture Number	Topics	PPT (link of ppts on the central server)	Industry Expert Session (If yes: link of ppts on the central server)	Web References
1-2	Introduction to web: Development: HTML,CSS			<a href="https://www.w3schools.com/html/default.asp">https://www.w3schools.com/html/default.asp</a>
3-5	Java script ,Boot strap,Jquery ,Canvas,AJAX and API,React JS			<a href="https://www.tutorialspoint.com/jquery/jquery-events.htm">https://www.tutorialspoint.com/jquery/jquery-events.htm</a>
6-8	Sockets Chat application GIT and GitHub AWS			<a href="https://www.tutorialspoint.com/javascript/javascript_events.htm">https://www.tutorialspoint.com/javascript/javascript_events.htm</a>
9-11	Components of Web Page			<a href="https://www.geeksforgeeks.org/7-main-components-of-a-website/">https://www.geeksforgeeks.org/7-main-components-of-a-website/</a>
12-14	Web pages Web sites Web servers, Search engines			<a href="https://www.tutorialspoint.com/internet_technologies/web_servers.htm">https://www.tutorialspoint.com/internet_technologies/web_servers.htm</a>
15-17	Server Side Frame works			<a href="https://www.tutorialspoint.com/internet_technologies/web_servers.htm">https://www.tutorialspoint.com/internet_technologies/web_servers.htm</a>
18-20	Java Spring,play jboss Node JS , PHP, Python			<ul style="list-style-type: none"> <li>• <a href="https://www.w3schools.com/jquery/default.asp">https://www.w3schools.com/jquery/default.asp</a></li> <li>• <a href="https://www.w3schools.com/python/default.asp">https://www.w3schools.com/python/default.asp</a></li> </ul>
21-22	CSS Basic BOX Model, Style CSS CSS Level 1 CSS Level2			<a href="https://www.javatpoint.com/types-of-css">https://www.javatpoint.com/types-of-css</a>

23-24	Fixed Nav Barm, Font propertiesposition			<a href="https://www.tutorialspoint.com/css/css_font_references.htm">https://www.tutorialspoint.com/css/css_font_references.htm</a>
25-27	Visual Studio code, Responsive Nav Bar Assets Transitions			<a href="https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property">https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property</a>
28-30	Developer mozilla org, Transform Assignment 2 Responsive Page			<a href="https://www.w3schools.com/css/css_rwd_intro.asp">https://www.w3schools.com/css/css_rwd_intro.asp</a>
31-33	Animation, Animation1Animation2, Animation3			<a href="https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property">https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property</a>
34-36	Github.com, Cascading style sheet			<a href="https://www.w3schools.com/css/">https://www.w3schools.com/css/</a>
38-39	Bootstrap, Getbootstrap and JS and Bundle			<a href="https://www.w3schools.com/bootstrap/bootstrap_ver.asp">https://www.w3schools.com/bootstrap/bootstrap_ver.asp</a>
40-42	3D Rotating Object, CSS custom Properties Math and Random Function			<a href="https://www.w3schools.com/css/">https://www.w3schools.com/css/</a>
43-45	Repeating Stringfunctions, Java script functions			<a href="https://www.w3schools.com/js/default.asp">https://www.w3schools.com/js/default.asp</a>
46-48	Prototypes, Java script style guide			<a href="https://www.w3schools.com/js/default.asp">https://www.w3schools.com/js/default.asp</a>
49-51	Asynchronous Programming, Call backHell			<a href="https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property">https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property</a>
52-53	Event Listing Document object, Model, Web API			<a href="https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property">https://developer.mozilla.org/en-US/docs/Web/CSS/transition-property</a>
54-55	Canvas chitkara web, Development, The Postmant app			<a href="https://www.geeksforgeeks.org/7-main-components-of-a-website/">https://www.geeksforgeeks.org/7-main-components-of-a-website/</a>

56-58	AJAX Node JS org ExpressJs.com EJS Templates JQuery Mongoose JS , E-COMMERCE V1,V2, Outline buttons Cookies Passport local mongoose Sockets, jquery Git and Git hub Cloud computing on AWS Elastic bean stack, React APP			<ul style="list-style-type: none"> <li>• <a href="https://reactjs.org/docs/faq-styling.html">https://reactjs.org/docs/faq-styling.html</a></li> <li>• <a href="https://medium.com/technfunnel/4-">https://medium.com/technfunnel/4-</a></li> </ul>
59-60	Node Js, Require a dirNpmjs.com Application, Views, Applications Models ,products, shopping cart,unsplash.com routes, React forms			<ul style="list-style-type: none"> <li>• <a href="https://reactjs.org/docs/jsx-in-depth.html">https://reactjs.org/docs/jsx-in-depth.html</a></li> <li>• <a href="https://reactjs.org/docs/create-a-new-react-app.html">https://reactjs.org/docs/create-a-new-react-app.html</a></li> </ul>

### 8. Action plan for different types of learners

Slow Learners	Average Learners	Fast Learners
1) Extra Cover-up classes 2) Additional Practice problems & Study material will be provided 3) Generic Mock interviews 4) Industry Expert speaks	1) Additional Technical topics related to Jobs Provided 2) Job Specific interview questions & answers will be provided. 3) Generic Mock interviews 4) Company specific Mock Interviews for shortlisted candidates of Top Brands. 5) Industry expert speaks	1) Advanced topics on the up Grad platform will be provided for self-study. 2) Generic Mock interviews 3) Company specific Mock Interviews for Top Brands. 4) Industry Experts speak

### 9. Evaluation Scheme & Components

Evaluation Component	Type of Component	No. of Assessments	Weightage of Component	Mode of Assessment
Component 2	Project based evaluation	04*	40%	Online
Component 3	End Term Examination	01	60%	Online
<b>Total</b>			<b>100%</b>	

\*Out of 4 Evaluation s, the ERP system automatically picks the best 2 evaluations for final evaluations

### 10. Details of Evaluation Components:

Evaluation Component	Description	Syllabus Covered (%)	Timeline of Examination	Weightage (%)
Component 02	Project Viva-1	Upto 25%	Week 3	40%
	Project Viva-2	26-50%	Week 5	
	Project Viva-3	51-75%	Week 7	
	Project Viva-4	76-100%	Week 9	
Component 03	End Term Examination	100%	Week 9	60%
Total				100%

\*As per Academic Guidelines minimum 75% attendance is required to become eligible for appearing in the End Semester Examination.

#### 11. Syllabus of the Course:

Lecture Number	Topics	Weightage
1-2	Introduction to web: Development: HTML,CSS	5%
3-5	Java script ,Boot strap,Jquery ,Canvas,AJAX and API,React JS	5%
6-8	Sockets Chat application GIT and GitHub AWS	5%
9-11	Components of Web Page	5%
12-14	Web pages Web sites Web servers, Search engines	5%
15-17	Server Side Frame works	5%
18-20	Java Spring,play jboss Node JS , PHP, Python	5%
21-22	CSS Basic BOX Model, Style CSS CSS Level 1CSS Level2	3%
23-24	Fixed Nav Barm, Font propertiesposition	3%
25-27	Visual Studio code, Responsive Nav BarAssets Transitions	5%
28-30	Developer mozilla org, Transform Assignment 2 Responsive Page	5%
31-33	Animation, Animation1Animation2, Animation3	5%
34-36	Github.com, Cascading style sheet	3%
38-39	Bootstrap, Getbootstrap and JS and Bundle	3%
40-42	3D Rotating Object, CSS custom Properties Math and Random Function	3%
43-45	Repeating Stringfunctions, Java script functions	3%
46-48	Prototypes, Java script style guide	3%
49-51	Asynchronous Programming, Call backHell	3%
52-53	Event Listing Document object, Model, Web API	3%
54-55	Canvas chitkara web, Development, The Postmant app	3%
56-58	AJAX Node JS org ExpressJs.com EJS Templates JQuery Mongoose JS , E-COMMERCE V1,V2, Outline buttons Cookies Passport local mangoose Sockets,jquery Git and Git hub Cloud computing on AWS Elastic bean stack, React APP	10%
59-60	Node Js, Require a dirNpmjs.com Application, Views, Applications Models ,products, shopping cart,unsplash.com routes, React forms	10%

This Document is approved by:

Designation	Name	Signature
Course Coordinator	Dr. Susheela Hooda	
Head Academic Delivery	Dr. Ambuj Aggarwal	
3 <sup>rd</sup> Year Dean	Dr. Rupali Gill	
Dean (Academic Affairs)	Dr. Rajnish Sharma	
Date	06-06-2022	