

CSE11151	Advanced Web Technologies	L	T	P	C
Version 1.0	Contact Hours 45 Hours	3	0	0	3
Pre-requisite/Exposure	Web Technologies				
Co-requisite					

Course Objectives:

- To provide the concepts of full stack web development
- Introduce the MERN stack to make students industry-ready

Course Outcomes:

CO1: Define basic concepts of HTML and CSS

CO2: Explain concepts of bootstrap, javascript and jquery

CO3: Apply concepts of Node.js to develop backends

CO4: Design databases for web applications

CO5: Build attractive front-end for web applications

Course Description:

This course will allow students to master both front and back-end development, becoming a full-stack developer by the end of the course. They can build fully-fledged websites and web apps, master frontend development with React and will learn the latest technologies, including Javascript, React, Node and even Web3 development.

Course Content:

Units	Lecture Hours
Unit-I: HTML-Refresher, The Anatomy of an HTML Tag, HTML Lists, HTML Image Elements, HTML Links and Anchor Tags, HTML Tables, HTML Forms CSS Refresher - Online CSS, Internal CSS, External CSS, Classes vs. Ids, HTML Divs, CSS Display Property, CSS Static and Relative Positioning, Absolute positioning, CSS Sizing	10
Unit-II: Bootstrap : Introduction to Bootstrap, Navigation Bar, Bootstrap grid layout system, containers, buttons and fonts, carousel, media query breakpoints, CSS Z index, CSS Selectors Javascript : Variables, Datatypes, strings, functions, conditions, loops, JQuery : Selections, Manipulation of styles, texts, attributes, event listeners, animations 9 Lecture Hours Backend Web Development : Introduction to Node.js , Node REPL, Native Node Modules Introduction to Express.js, Express Servers,	10

Units	Lecture Hours
Unit-IV: Database Design : SQL, Basic SQL commands, MongoDB CRUD Operations, Relationships, Database management with Mongoose.	8
Unit-V: Frontend Web Development : What is React, JSX and Babel, JSX Expressions, React Styling, Components, React Props, React DevTools, React Hooks, Forms, Event Handling.	8

Examination Scheme:

Components	Mid Term	Class Assessment	End Term
Weightage (%)	20	30	50

Relationship between Course Outcomes (COs) and Program Outcomes (POs):

1 = Weakly Mapped, 2 = Moderately Mapped, 3= Strongly Mapped

Course Code	Course Name	COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
CSE11151	Advanced Web Technologies	CO11151.1	2	3	2	2	2	1	1	-	2	2	3	1	1	3	2
CSE11151	Advanced Web Technologies	CO11151.2	2	3	2	2	2	1	2	-	1	2	2	1	3	3	2
CSE11151	Advanced Web Technologies	CO11151.3	1	3	3	3	3	1	3	-	3	3	3	2	2	2	2

		CO11151.4	3	2	3	3	2	2	3	-	2	2	3	2	2	1	1
		CO11151.5	1	2	3	3	2	3	3	-	1	3	3	1	2	2	3
		CO11151	1.8	2.6	2.6	2.6	2.2	1.6	2.4	-	1.8	2.4	2.8	1.4	2.0	2.2	2.0