

## Client Side Scripting using Javascript (2304CS431)

Semester	Credit	Contact Hours			Examination Scheme (Marks)				
					Theory		Practical		Total
		L	T	P	SEE	CE	SEE	CE	
4	4	3	-	2	40	30	20	10	100

### Course Objective

This course enables students to become familiar with core concepts of web programming, client-side scripting using JavaScript and working with JQuery.

### Prerequisite

Web Designing

### Course Outcome

At the end of this course, students will be able to:

1. implement client-side scripting using JavaScript. (BL-3)
2. prepare regular expression for validation in JS. (BL-3)
3. use array methods and objects in JS. (BL-3)
4. demonstrate the arrow function, classes and destructuring. (BL-3)
5. manipulate the data using JQuery. (BL-3)

### Course Content

T: Teaching Hours, W: Weightage

Sr.	Topics	T	W
1	<b>Introduction to JavaScript</b> Introduction, pros and cons of client side scripting, client side scripting vs server side scripting, Types of JS, variables, strings, string handling functions, number handling functions, arithmetic operators, conditional statements, Loops.	10 hr	20 %
2	<b>Functions and Regular expressions</b> UDF in JS, Pop up boxes, Inbuilt functions, Validations, Validations using Regular Expression.	8 hr	20 %
3	<b>Array and Object</b> JS Arrays, Array properties, Array methods (ES5 and ES6), Introduction to JS objects, Inbuilt objects (string, date, math, etc.), DOM, DHTML, Mouse event, Keyboard event, Form/object event, Callback in JS, function as argument.	12 hr	20 %
4	<b>ES6</b> JS classes, Arrow functions, Let, Var & Const Keyword, ES-6 Array Methods, Destructuring and its types, Modules, Spread operators.	7 hr	20 %
5	<b>JQuery</b> Introduction to JQuery, Syntax of JQuery, Selectors, Event methods, Effects, Chaining, DOM manipulation, Dimension methods, Traversing.	8 hr	20 %

### Reference Books

1. JavaScript Quick Syntax Reference  
| by Mikael Olsson
2. JavaScript Absolute Beginner's Guide  
| by Kirupa Chinnathambi | Pearson | Ed. 3
3. JavaScript: The Complete Reference  
| by Thomas Pow and Fritz Schneider | Ed. 2 (Osborne Complete Reference Series)
4. Head First JavaScript Programming: A Brain Friendly Guide [Paperback]  
| by Elisabeth Robson and Eric Freeman

### Suggested List of Practicals / Tutorials

1. Revision of WebDesigning
2. Introduction of JavaScript string functions
3. Working with number handling functions, operators and if condition
4. Implementation of if condition inside loops
5. Working with loops - 2
6. JS UDF, PopUp boxes and validations
7. Implementing validation in forms and pages
8. Working with arrays
9. Working with various methods of array
10. Implementation of date object
11. Working with DOM
12. Implementing mouse event
13. Implementing keyboard event
14. Understanding the new concepts of ES-6
15. Implementation of new ES-6 concepts in program
16. Working with ES-6 array methods
17. Implementation of array methods of ES-6 in programs
18. Working with destructuring, import, export and spread operators
19. Implementation of JQuery - 1
20. Implementation of JQuery-2

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