Course Design Document

Course Code	
Course Name	Javascript

Duration (in days)	3	Proficiency Level	Front End Development
Pre-requisites	None	Target Audience	Campus Hires

Learning Outcome

At the end of the program, participants will be able to learn:

- Understand the fundamentals of Javascript and its benefits.
- Master Javascript syntax, data types, and objects.
- Utilize Javascript functions and classes for creating reusable and maintainable code.
- Apply Javascript features to design and develop web pages.
- DOM Programming
- Using ES 6 features

Day-wise Session Plan

Day	Unit	Objective(s)	Hours
1	Introduction to Javascript	• The Role of JavaScript in Web Applications • The Document Object Model (DOM) • Fundamentals of JavaScript • JavaScript Objects • JavaScript Quirks • JavaScript Closures • Prototypes in JavaScript	2
1	Getting Started with Javascript	• A Hello World App in JavaScript • Communicating with End Users from JavaScript • Separating HTML and JavaScript Sources • Accessing the DOM from JavaScript • The Use of Strict Mode • Variable Declarations: var, let and const • Empty Values in JavaScript: undefined and null • User Interactions Using alert, prompt, and confirm	3
1	Operators & Control Structures	• Numbers in JavaScript • Initializing and Manipulating Strings in JavaScript • Analyzing and Modifying Strings in JavaScript • Dates in JavaScript • Using the Math Library for Common Math Operations • Arithmetic Operators • Logical and Conditional Operators • Type Casting • Looping Control Structures	3
2	Functions & Arrays	• An Introduction to Functions in JavaScript • Global and Local Variables • Working with Functions • The Fundamentals of Error Handling • Creating Arrays	2

		• Copying Arrays • Splicing and Slicing Arrays • Concatenating and Sorting Arrays	
2	Objects	• An Introduction to JavaScript Objects • Removing Properties from Objects • The "this" Keyword in JavaScript Objects • Linking Functions to Objects • Object Constructors • Creating New Objects from Existing Ones • Object Methods • Freezing Objects • The map Method for JavaScript Arrays • The reduce and filter Methods for JavaScript Arrays • The instanceOf Operator	3
2	Web Fundamentals: Dynamic Web Pages	• The Client-Server Environment • The History and Purpose of JavaScript • Variables in JavaScript • Manipulating Data with Arrays and String Functions • Making HTML Dynamic Using JavaScript • User Input and Form Validation • Using JavaScript for Form Validation • Using Pattern Recognition for Form Validation • Using Classes to Build JavaScript Objects	3
3	ES 6 features	• ECMA Specifications on Javascript • Template String / literals / Multi line strings • Classes in Javascript • Spread Operator • Destructuring Arrays • Destructuring Objects • Arrow Expressions and this keyword • Optional Parameters • Default Arguments • Restful Parameters	5
3	Document object Model (DOM)	• Need for DOM • Creating,finding,appending & deleting elements • DOM Programming in Javascript • Document.getelementsBytagName() • Document.getElementByID() • Document.querySelector()	3