

INTRODUCTION TO JAVASCRIPT (4 Days)

This class gives you experience using JavaScript to make your web pages more dynamic and user friendly. You will start by learning about the HTML DOM, JavaScript Syntax, and other essentials. Then, you will learn about important structures like variables, arrays, and operators. Get hands-on experience using functions to control how your code is executed. Next, use built-in objects for basic data processing and learn to leverage loops to save time when writing code. You will practice with event handlers and listeners to respond to user input and other web page interactions. You will learn how JavaScript interacts with HTML and CSS. Finally, the class wraps up with best practices to prevent and handle errors.

By the end of the training, you will be ready to use JavaScript to make your web pages more dynamic and functional.

COURSE BENEFITS

- Master the fundamentals of JavaScript.
- Understand JavaScript syntax.
- Learn about objects, methods, and properties.
- Work with JavaScript variables to store data.
- Organize code by creating your own functions.
- Write flow control logic to handle real-life decisions and complex problems.
- Use loops to save time.
- Capture and manage events such as mouse clicks and page loads.
- Modify HTML and CSS on the fly with JavaScript.
- Handle and prevent JavaScript errors.

CLASS PREREQUISITES

Experience with HTML *is required* for this JavaScript class:

Experience with CSS and Programming *would be useful* for this JavaScript class:

PREREQUISITE COURSES

Courses that can help you meet these prerequisites:

- [Introduction to HTML Training](#)

COURSE OUTLINE

JavaScript Basics

- The Name "JavaScript"
- What is ECMAScript?
- The HTML DOM
- JavaScript Syntax
- Accessing Elements
- Where Is JavaScript Code Written?
- JavaScript Objects, Methods and Properties

Variables, Arrays, and Operators

- JavaScript Variables
- Constants
- Arrays
- Playing with Array Methods
- JavaScript Operators
- The Modulus Operator
- The Default Operator

JavaScript Functions

- Global Objects and Functions
- User-defined Functions
- Returning Values from Functions

Built-In JavaScript Objects

- String
- Math
- Date
- Helper Functions

Conditionals and Loops

- Conditionals
- if - else if - else Conditions
- Short-circuiting
- Switch / Case
- Ternary Operator
- Truthy and Falsy
- Loops
- break and continue
- Array: forEach()

Event Handlers and Listeners

- On-Event Handlers
- The addEventListener() Method
- Capturing Key Events
- Benefits of Event Listeners
- Timers

The HTML Document Object Model

- CSS Selectors
- The innerHTML Property
- Nodes, NodeLists, and HTMLCollections
- Accessing Element Nodes
- Dot Notation and Square Bracket Notation
- Collections of Elements
- window is Implicit
- Accessing Elements Hierarchically
- Accessing Attributes
- Creating New Nodes
- Focusing on a Field
- Shopping List Application
- Manipulating Tables

CSS Object Model

- Changing CSS with JavaScript
- The style Property vs getComputedStyle()
- Hiding and Showing Elements
- Checking and Changing Other Style Properties
- Increasing and Decreasing Measurements
- Making changeFontSize() More Flexible
- Custom data Attributes
- Gotcha with fontWeight
- Font Awesome
- classList Property

Errors and Exceptions

- Runtime Errors
- Completely Unhandled Errors
- Globally Handled Errors
- Structured Error Handling
- Try/Catch