



## JavaScript Training

### Introduction to JavaScript

#### Why JavaScript?

JavaScript is one of the most popular programming languages on the web. It is a scripting language used to enable access to objects within applications. JavaScript is primarily used in the form of client-side scripting and implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites.

#### Duration: 2 days

**Class size:** 10 students max

**Times:** 9:00am - 5:00pm

**Price:** *Refer to our website for current course and package pricing*

#### After the course?

Each student will receive:

- Certificate of completion
- Training manual
- 12 months FREE email support
- FREE class re-sit (if necessary)

#### About the Course

This 2 day course introduces JavaScript, including how to write JavaScript, programming principles, working with numbers and arithmetic, string operations and Boolean calculations. Other topics include form validation and form calculators. Practical projects are designed to give students hands-on confidence, and include creating a game, a slide show and jump menus.

#### Who Should Do This Course?

This course is designed for people who want to extend their web development skills beyond HTML and want to enhance the user interface on the website.

#### Prerequisites

Although there are no prerequisites for attending this course; we recommend that participants have a basic understanding of HTML and CSS to get the best out of this course and to better contextualise the learning

## Content

### Unit 1: Introduction

- The Origins of JavaScript
- The Document Object Model
- Understanding the Browser

### Unit 2: JavaScript Syntax

- Statements
- Comments
- Variables
- Data Types
- Arrays
- Objects
- Arithmetic Operators
- Conditional Statements
- Comparison Operators
- Logical Operators
- Looping Statements
- The While Loop
- The For Loop
- Functions
- Objects

### Unit 3: The Document Object Model

- Understanding Document
- Understanding Object
- Understanding Model
- Understanding Nodes
- Element Nodes
- Text Nodes
- Attribute Nodes
- Cascading Style Sheets
- Getting Elements
- Understanding Attributes
- `getAttribute`
- `setAttribute`

### Unit 4: Project - A JavaScript Image Gallery

- The Markup
- A DOM Diversion
- Finishing the Function
- Applying the JavaScript

- Event Handlers
- Expanding the Functions
- Introducing `childNodes`
- Introducing the `nodeType` Property
- Adding a Description with JavaScript
- Introducing `nodeValue` Property
- Introducing `firstChild` and `lastChild`
- Using `nodeValue` to Update the Description

### Unit 5: Best Practice

- The JavaScript - Pseudo Protocol
- Inline Event Handler
- Separation of Structure and Style
- Progressive Enhancement
- Unobtrusive JavaScript
- Backward Compatibility
- Object Detection
- Browser Sniffing
- Performance Considerations
- Minimising DOM Access and Markup
- Assembling and Placing Scripts
- Minification

### Unit 6: Project - The Image Gallery Revisited

- A Quick Recap
- Checking if JavaScript is Unobtrusive
- Adding the Event Handlers
- Sharing the Load
- Fine-Tuning
- Keyboard Access
- Sharing Hooks with CSS
- DOM Core and HTML-DOM

### Unit 7: Creating Markup on the Fly

- Understanding Old-School Methods
- `document.write`
- `innerHTML`
- Understanding DOM Methods
- `createElement`
- `appendChild`
- `createTextNode`

- Inserting a new Element Before an Existing One
- Inserting a New Element After an Existing One

## Unit 8: Enhancing Content

- Making the Invisible Visible
- Working with the Content
- The Markup - HTML
- The CSS
- The JavaScript
- Displaying Abbreviations
- Writing the displayAbbreviations Function
- Displaying Citations
- Writing the displayCitations Function
- Displaying Access Keys
- Retrieving and Attaching Information

## Unit 9: CSS-DOM

- Structure
- Presentation
- Behaviour
- Separation
- Understanding the Style Property
- Getting Styles
- Setting Styles
- Knowing When to Use DOM Styling
- Styling Elements in a Node Tree
- Repetitive Styling
- Responding to Events
- Understanding className
- Abstracting a Function

## Unit 10: An Animated Slideshow

- Understanding Animation Basics
- Position
- Time
- Incremental Movement
- Abstraction
- Working with Practical Animation
- The Situation
- The Solution
- Adding CSS
- Adding JavaScript
- The Scope
- Refining the Animation
- Adding a Safety Check
- Generating Markup

## Unit 11: Putting it All Together

- Raw Materials
- Site Structure
- Page Structure
- CSS: Colour
- CSS: Layout
- CSS: Typography
- Javascript Page: Highlighting
- Javascript: Slideshow
- Javascript Internal: Navigation
- Javascript: Image Gallery
- Javascript: Table Enhancements
- Javascript: Form Enhancements
- Javascript: Minification

## Looking for course dates?

To view a full list of course dates, please visit our website at [www.dynamicwebtraining.com.au](http://www.dynamicwebtraining.com.au)

Alternatively please contact our office on **1300 888 724**