

# Course Outline | JavaScript Introduction

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2 day(s)

## Overview

If you are new to JavaScript, or an experienced web developer looking to improve your skills, This JavaScript Introduction provides you with complete, no-nonsense coverage of this quirky yet essential language for web development. You will learn everything from primitive data types to complex features, including JavaScript elements involved with Ajax and dynamic page effects. By the end of this course, you will be able to work with even the most sophisticated libraries and web applications.

Complete with hands on practices and examples of JavaScript use, JavaScript Introduction will show you how to integrate the language with the browser environment, and how to practice proper coding techniques for standards-compliant websites.

## Prerequisites

An understanding of basic HTML is required, or attendance of our HTML introduction course. This course is also useful to users of Dreamweaver, Expression Web or SharePoint Designer.

## Course Outline

### 1 - Introduction and First Looks

- Twisted History: Specs and Implementations
- Cross-Browser Incompatibility
- Common JavaScript Myths
- What You Can Do with JavaScript
- First Look at JavaScript
- The JavaScript Sandbox
- Accessibility and JavaScript Best Practices

### 2 - JavaScript Data Types and Variables

- Identifying Variables
- Scope
- Simple Types
- Constants: Named but Not Variables

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## 3 - Operators and Statements

- Format of a JavaScript Statement
- Simple Statements
- Conditional Statements and Program Flow
- The Conditional Operators
- The Logical Operators
- Advanced Statements: The Loops

## 4 - The JavaScript Objects

- The Object Constructor
- The Number Object
- The String Object
- Regular Expressions and RegExp
- Purposeful Objects: Date and Math
- JavaScript Arrays
- Associative Arrays

## 5 - Functions

- Defining a Function
- Callback Functions
- Functions and Recursion
- Nested Functions
- Function As Object

## 6 - Catching Events

- The Event Handler

## 7 - Forms and JIT Validation

- Accessing the Form
- Attaching Events to Forms: Different Approaches
- Selection
- Radio Buttons and Checkboxes
- Input Fields and JIT Regular Expressions

## 8 - The Sandbox and Beyond

- The Sandbox
- All About Cookies
- Alternative Storage Techniques
- Cross-Site Scripting (XSS)
- The Basic Browser Objects
- BOM at a Glance
- The window Object
- Frames and Location
- history, screen, and navigator
- The all Collection
- Inner/Outer HTML and Text

## 9 - The Document Object Model

- A Tale of Two Interfaces
- The DOM and Compliant Browsers
- The DOM HTML API
- Understanding the DOM
- The DOM Core Document Object
- Element and Access in Context

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- Modifying the Tree

## 10 - Creating Custom JavaScript Objects

- The JavaScript Object and Prototyping
- Creating Your Own Custom JavaScript Objects
- Object Detection, Encapsulation, and Cross-Browser Objects
- Chaining Constructors and JS Inheritance
- One-Off Objects
- Advanced Error-Handling Techniques

## 11 - Building Dynamic Web Pages

- JavaScript, CSS, and DOM
- Fonts and Text
- Position and Movement
- Size and Clipping
- Display, Visibility, and Opacity

## 12 - Moving Outside the Page with Ajax

- How Ajax Works
- Hello Ajax World!
- The Ajax Object
- Working with XML