

**Intermediate JavaScript Language Skills and Coding Practices**

**Course Number:** SCRPT-101  
**Duration:** 3 days

**Overview**

Accelebrate's Intermediate JavaScript Language Skills and Coding Practices training class is a hands-on course that teaches attendees how to use JavaScript language skills such as regular expressions, closures and Ajax, and how to write fast-executing code that conforms to established best practices.

**Prerequisites**

All attendees must have prior HTML, CSS, and JavaScript development experience.

**Materials**

All Intermediate JavaScript training students receive a related textbook.

**Software Needed on Each Student PC**

* Web or text editor of your choice
* Web browsers - a recent version of one or more of the following:
  + Google Chrome
  + Mozilla Firefox
  + Microsoft Edge
  + Safari

**Objectives**

* Use regular expressions to validate data
* Implement structured exception handling
* Manipulate Document Object Model (DOM) elements
* Manage Ajax requests
* Create custom JavaScript object classes
* Use advanced JavaScript techniques such as closures
* Write JavaScript code using established coding standards and best practices

**Outline**

* Introduction
* Quick JavaScript Recap
  + Variables and Data Types
  + Intrinsic JavaScript Objects (String, Array, Date, Math)
  + Functions
  + Conditional and Iterative Logic
* Regular Expressions
  + The Building Blocks of Regular Expressions
  + Implementing Regular Expressions in JavaScript
  + Regular Expression Object Methods
  + String Methods That Accept Regular Expressions
  + Backreferences
  + Data Validation
* Structured Exception Handling
  + Using try/catch
  + Throwing Your Own Exceptions
  + Using finally
* Event-Driven JavaScript
  + Tag-Based and Code-Based Event Handlers
  + Setting Up Event Listeners
  + Writing Event Callback Functions
* The Document Object Model
  + The Legacy DOM
  + The W3C DOM Standard
  + Traversing the DOM Tree
  + Manipulating DOM Elements
* Ajax Development
  + Creating the XMLHttpRequest Object
  + Managing Ajax Requests
    - HTML Response
    - XML Response
    - JSON Response
* Object-Oriented JavaScript
  + Creating a Plain JavaScript Object
  + Creating an Object Class
  + Using the prototype of the Class Constructor
  + Extending Native JavaScript Objects
* A Closer Look at JavaScript Functions
  + Functions with a Flexible Number of Arguments
  + Anonymous Functions
  + Passing Functions to Other Functions and Function Instance Methods
  + Closures
* Production-Grade JavaScript
  + Where to Put JavaScript Code
  + Minifiying and Compressing .js Files
  + Debugging JavaScript
  + JavaScript Unit Testing Using QUnit
* JavaScript Best Practices
  + Unobtrusive JavaScript
  + Separating Page Structure and Logic
  + Progressive Enhancement via Feature Detection
  + Coding Standards (Crockford/Yahoo)
* Survey of JavaScript Frameworks - time permitting, the course will cover basic aspects of whichever JavaScript framework your organization uses; typically one of the following:
  + jQuery/jQuery UI
  + Yahoo User Interface
  + Prototype/script.aculo.us
  + Ext JS
  + Moo Tools
  + Dojo
* Conclusion