

**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