

**Introduction to Modern JavaScript Development**

**Course Number:** SCRPT-100
**Duration:** 5 days

**Overview**

Accelebrate's Introduction to Modern JavaScript Development training class teaches attendees how to build rich client-side web applications using HTML, CSS, and JavaScript. Students develop real-world JavaScript applications and learn how to create object-oriented JavaScript applications, handle exceptions, and how to use regular expressions. Then attendees take their JavaScript skills to a more advanced level by working with events, images, timers, closures, callbacks, namespaces, and JSON.

**Prerequisites**

[Fundamentals of HTML5 and CSS3 training](file:////training/html5-css3) or equivalent experience. If attendees will not have thorough knowledge of HTML5 fundamentals, please let us know and we will precede this course with a one-day HTML5 primer. No prior programming experience is assumed, though this course can be swiftly adapted for a programming-savvy audience.

**Materials**

All JavaScript training students receive comprehensive courseware.

**Software Needed on Each Student PC**

* Windows, macOS, or Linux
* 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**

* Develop real-world JavaScript applications
* Use arrays, web storage, and JavaScript libraries
* Create object-oriented JavaScript applications
* Handle exceptions
* Use regular expressions
* Work with events, images, and timers as they build applications like slide shows
* Use closures, callbacks, namespaces, and the module pattern to secure their applications
* Use JSON to transmit and store data

**Outline**

* Introduction
* Getting Started With JavaScript
	+ How to include JavaScript in an HTML document
	+ Two ways to include JavaScript in the head of an HTML document
	+ The JavaScript syntax
	+ How to work with JavaScript data
	+ Two illustrative applications
* The Essential JavaScript Statements
	+ How to code the basic control statements
	+ Three illustrative applications
	+ How to work with arrays
	+ The Test Scores application with an array
* JavaScript Objects, Functions, and Events
	+ How to use objects to work with data
	+ How to use functions
	+ How to handle events
	+ Two illustrative applications
* How To Script Forms and Controls
	+ DOM scripting properties and methods
	+ The FAQs application
	+ How to script forms and controls
	+ The Register application
	+ How to add new nodes to the DOM
	+ The Register application with a table
* How To Test and Debug a JavaScript Application
	+ An introduction to testing and debugging
	+ How to debug with Chrome’s developer tools
	+ Other debugging methods
* Numbers, Strings, and Dates
	+ How to work with numbers
	+ The PIG application
	+ How to work with strings
	+ How to work with dates and times
	+ The Count Down application
* How To Code Control Statements
	+ How to code conditional expressions
	+ How to code the selection structures
	+ The Invoice application
	+ How to code the iteration structures
* Arrays and Web Storage
	+ How to create and use an array
	+ How to use the methods of an Array object
	+ Other skills for working with arrays
	+ How to use web storage
	+ The Task Manager application
* How To Create and Use Functions
	+ Basic skills for working with functions
	+ The Task Manager application
	+ Object-oriented skills for working with functions
* How To Create and Use Objects
	+ Basic skills for working with objects
	+ What you need to know about JavaScript prototypes
	+ The Task Manager application
	+ Advanced skills for working with objects
	+ The enhanced Task Manager application
* Using Regular Expressions, Handling Exceptions, and Validating Data
	+ How to use regular expressions
	+ How to handle exceptions
	+ The Register application
* Events, Images, and Timers
	+ How to work with events
	+ The FAQs application
	+ How to work with images
	+ The Rollover application
	+ How to use timers
	+ The Slide Show application
* Closures, Callbacks, and Recursion
	+ Introduction to closures
	+ How to use closures
	+ The Slide Show application
	+ How to use callbacks
	+ How to use recursion
	+ The Task Manager application
* Namespaces, Modules, and Custom Properties
	+ How to work with namespaces
	+ The Task Manager application
	+ How to work with the module pattern
	+ The Slide Show application
	+ How to customize properties
	+ The enhanced Slide Show application
* JavaScript Object Notation (JSON)
	+ An introduction to JSON
	+ How to work with JSON in JavaScript
	+ The Task Manager application
	+ How to customize the stringify method
	+ How to customize the parse method
	+ The enhanced Task Manager application
* Conclusion