Systems & Network Training

Complete JavaScript

A 3 day `Hands on` training course

★ Description

A hands on course covering JavaScript programming. Core JavaScript is covered first, including the basics, arrays, functions, classes, modules and Regular expressions. Client side JavaScript is then covered including JavaScript in browsers, Scripting CSS, the jQuery library and HTML APIs.

👍 Key outcomes

By the end of the course delegates will be able to:

- ✔ Read JavaScript.
- ✔ Write JavaScript.
- ✔ Debug JavaScript.

Training Approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning. Hands on sessions are used throughout to allow delegates to consolidate their new skills.

Details

Who will benefit?
Anyone wishing to learn JavaScript.

Prerequisites
None.

Duration: 3 days

Overall rating: ★★★★★

Generic Training	Small Class Sizes	Hands On Training	Our Courseware	Customise Your Course
Generic training compliments product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".	We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.	The majority of our courses use hands on sessions to reinforce the theory.	We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.	Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.
"Friendly environment with expert teaching that teaches the why before the how." G.C. Fasthosts	*"Excellent course. The small class size was a great benefit..."* M.B. IBM	*"Not many courses have practice added to it. Normally just the theoretical stuff is covered."* J.W. Vodafone	*"Comprehensive materials that made the course easy to follow and will be used as a reference point."* V.B. Rockwell Collins	*"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."* S.R. Qinetiq

Course Content

CORE JAVASCRIPT

Lexical structure: Character set, comments, literals, identifiers, and reserved words, optional semicolons.

Types, values and variables: Numbers, text, boolean values, null and undefines, the global object, wrapper objects, immutable primitive values and mutable object references, type conversions, variable declaration, variable scope.

Expressions and operators: Primary expressions, object and array initializers, function definition expressions, property access expressions, invocation expressions, object creation expressions, operator overview, arithmetic expressions, relational expressions, logical expressions, assignment expressions, evaluation expressions, miscellaneous operators.

Statements: Expression statements, compound and empty statements, declaration statements, conditionals, loops, jumps, miscellaneous statements, summary of JavaScript statements.

Objects: Creating objects, querying and setting properties, deleting properties, testing properties, enumerating properties, property getters and setters, property attributes, object attributes, serializing objects, object methods.

Arrays: Creating arrays, reading and writing array elements, sparse arrays, array length, adding and deleting array elements, iterating arrays, multi-dimensional arrays, array methods, FCMAScript 5 array methods, array type, array-like objects, strings as arrays.

Functions: Defining functions, invoking functions, function arguments and parameters, functions as values, functions as namespaces, closures, function properties, methods and constructor, functional programming.

Classes and modules: Classes and prototypes, classes and constructors, Java-style classes in JavaScript, augmenting classes, classes and types, object oriented techniques in JavaScript, subclasses, classes in ECMAScript 5, modules.

Pattern matching and regular expressions: Defining regular expressions, string methods for pattern matching, the RegExp object.

JavaScript subsets and extensions: JavaScript subsets, constants and scoped variables, destructuring assignment, iteration, shorthand functions, multiple catch clauses, E4X: ECMAScript for XML.

Server-side JavaScript: Scripting Java with Rhino, asynchronous I/O with node.

CLIENT SIDE JAVASCRIPT

JavaScript in web browsers: Client side JavaScript, embedding JavaScript in HTML, execution of JavaScript programs, compatibility and interoperability, accessibility, security, client side frameworks.

The Window object: Timers, browser location and navigation, browsing history, browser screen information, dialog boxes, error handling, document elements as window properties, multiple windows and frames.

Scripting Documents: Overview of the DOM, selecting document elements, document structure and traversal, attributes, element content, creating, inserting and deleting nodes. Example: generating a table of contents, document and element geometry and scrolling, HTML forms, other document features.

Scripting CSS: Overview of CSS, important CSS properties, scripting inline styles, querying computed styles, scripting CSS classes, scripting stylesheets.

Handling events: Types of events, registering event handlers, event handler invocation, document load events, mouse events, mousewheel events, drag and drop events, text events, keyboard events.

Scripted HTTP: Using XMLHttpRequest, HTTP by <script>: JSOMP, Comet with server-sent events.

The jQuery library: jQuery basics, jQuery getters and setters, altering document structure, handling events with jQuery, Animated effects, Ajax with jQuery, Utility functions, jQuery selectors and selection methods, Extending jQuery with plug-ins. The jQuery UI library.

Client side storage: localStorage and sessionStorage, Cookies, IE usingData persistence, Applicatioin storage and offline webapps.

Scripted media and graphics: Scripting images, Scripting audio and video, SCG:scalable vector graphics, Graphics in a <canvas>.

HTMLS APIs: Geolocation, history management, cross-origin messaging, web workers, type arrays and ArrayBuffers, blobs, the filesystem API, client side databases, web sockets.

Step back

HTML5 development fundamentals → Complete JavaScript

Step forward

Complete JavaScript →
- Programming in HTML5 with CSS
- Total PHP for developers