Hands-On

JavaScript Programming



Course Description

This Hands-On course provides the knowledge necessary to design and develop dynamic Web pages using JavaScript. It introduces students to JavaScript and how the language can be used to turn static XHTML pages into dynamic, interactive Web pages.

Students will learn the syntax of the JavaScript language and how client-side scripts interact with server-side programs. Additional topics include the Document Object Model, form validation, cookies, how to create functions, and how to create your own script files.

Hands-on exercises are performed throughout each day to demonstrate key concepts. At the end of this class, participants will have the knowledge necessary to utilize the power of JavaScript to provide dynamic content on their Web sites and much more..

Students Will Learn

- JavaScript Language and Syntax
- JavaScript Directives
- Scripting CSS
- Creating and Using Functions
- JavaScript Objects
- Arrays
- Cookies
- Event Handling
- And More...

Target Audience

Anyone interested or working with JavaScript.

Prerequisites

Basic computer skills and knowledge of HTML fundamentals including use of Cascading Style Sheets. Students who are not

familiar with HTML should register for the course Web Site Development with HTML/JavaScript.

Course Outline

Introduction to Client-Side JavaScript

Embedding JavaScript in an XHTML Document Evolution of the JavaScript Language JavaScript Versions and Browser Support

Statements and Operators

Variable Declarations

Assignment Operators and Statements

Arithmetic Operators

Logical Operators

Comparison Operators

String Operators

Conditional Operators

Operator Precedence

DOM/CSS Scripting

Introduction to the Document Object Model (DOM)

Using the getElementById method

Modifying Page Content with the DOM

Manipulating CSS using JavaScript

Programmatic Access to CSS

Implementing Functions

Defining Functions

Invoking Functions

Named and Anonymous Functions

Passing Arguments

Local vs. Global Variables

Using the return Statement

Implementing Control Constructs

Introduction to Conditional and Looping Constructs

The if else Statements

The do while Statements

The for in Statements

The switch Statement

JavaScript Objects

The JavaScript Browser Object Model

JavaScript Object Properties

Object Methods

The new Keyword

The this Keyword

Creating New Object Instances Using Constructor Functions

String, Date and Array Objects

Fundamental JavaScript Directives

Inline JavaScript
Linking Web Pages to External JavaScript Files
JavaScript Using <script> Tags and Attributes
Deferred scripts
<noscript> Tags

Implementing Arrays

Using Arrays in JavaScript
Predefined JavaScript Object Arrays
Creating Arrays
Reading and Writing to an Array
Common Array Properties and Methods

Cookies

Overview of JavaScript Cookies Session and Persistent Cookies Using Cookies on a Web Page Common Uses of JavaScript Cookies

Common Applications

Form Validation and Testing
Working with Regular Expressions
User Interaction
Local Form Processing
Object Detection
Creating New Windows
Adding Content to a Window
Browser Awareness Using the navigator Object
Interactive Graphics

Event Handling

The W3C and Internet Explorer Event Models The Event Object Registering JavaScript Events Inline Event Handlers Processing Keyboard and Mouse Events

Delivery Method

Instructor-Led with numerous Hands-On labs and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring

their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

3 Days