

# JavaScript Fundamentals for Non-Programmers

<b>Audience</b>	This course is designed for students who have fundamental skills in Internet usage; Web page authoring, including proficiency in Hypertext Markup Language (HTML); and networking experience. No previous programming experience is required.
<b>Description</b>	The course uses a combination of lecture, hands-on practice, and independent exercises to teach developers how to use the features of the JavaScript language to design client-side, platform-independent solutions. Students learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies. Students will also learn to use the most popular applications of JavaScript.
<b>Objectives</b>	Upon completion of the course, students should be able to: <ul style="list-style-type: none"><li>■ discuss JavaScript concepts and characteristics,</li><li>■ create JavaScript expressions; use variables, operators and event handlers,</li><li>■ use JavaScript functions,</li><li>■ control program flow with if..else, while, for, break, do...while and other statements,</li><li>■ create commonly used object models such as document and image objects,</li><li>■ create additional objects such as string, array, date, etc. objects,</li><li>■ develop interactive forms,</li><li>■ set up cookies and security with JavaScript,</li><li>■ control frames with JavaScript,</li><li>■ create custom objects.</li></ul>
<b>Length</b>	2 days

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## I. Introduction to JavaScript

- A. Introduction to Scripting
- B. Origins of JavaScript
- C. JavaScript Characteristics
- D. JavaScript and Common Programming Concepts
- E. Java and JavaScript

F. Server-Side vs. Client-Side Applications

G. Annotating Your Code with Comments

## II. Working with Variables and Data in JavaScript

- A. Using JavaScript to Communicate with the User
- B. Using Data More Than Once: Variables



- C. JavaScript Expressions
  - D. Operators
  - E. Inline Scripting, Simple User Events and the onLoad and onUnload Event Handlers
  - F. Keywords and Reserved Words
- III. Functions, Methods and Events in JavaScript**
- A. Functions
  - B. Defining a Function
  - C. Calling a Function
  - D. User Events and JavaScript Event Handlers
  - E. Methods as Functions
- IV. Controlling Program Flow in JavaScript**
- A. Controlling Decisional Program Flow
  - B. The if...else Statement
  - C. The while Statement
  - D. The do...while Statement
  - E. The for Statement
  - F. The break Statement
  - G. The continue Statement
  - H. The switch Statement
- V. The JavaScript Object Model**
- A. The JavaScript Object Model
  - B. Commonly Used Objects
  - C. The window Object
  - D. The document Object
  - E. The with Statement
  - F. The image Object
  - G. The history Object
  - H. The location Object
  - I. The navigator Object
- VI. JavaScript Language Objects 6-1 Pre-Assessment Questions**
- A. Introduction to JavaScript Language Objects
  - B. The String Object
  - C. Additional String Object Methods
  - D. Evaluating Strings
  - E. JavaScript Regular Expressions
  - F. The Array Object
  - G. The Date Object
  - H. Setting and Extracting Time Information
  - I. The Math Object
- VII. Developing Interactive Forms with JavaScript**
- A. Interactive Forms
  - B. Overview of Form Elements
  - C. Referring to a Form Element
  - D. The form Object
  - E. The button Object
  - F. The checkbox Object
  - G. The text and textarea Objects
  - H. The radio Object
  - I. The select Object
  - J. Multiple-Selection Lists
  - K. Form Validation
- VIII. Cookies and JavaScript Security**
- A. Security and Cookies in JavaScript
  - B. What Are Cookies?
  - C. How Are Cookies Sent?
  - D. Who Can Send Cookies?
  - E. Storing Cookies
  - F. Why Use Cookies?
  - G. Assigning a Cookie

- H. Testing for Cookie Presence
- I. Clearing a Cookie
- J. Controlling Cookies in the Browser
- K. JavaScript Security Issues

**IX. Controlling Frames with JavaScript**

- A. Using JavaScript with Frames and Windows
- B. Targeting Frames with JavaScript
- C. Changing Two or More Frames with JavaScript
- D. Frames, Functions and Variables
- E. Targeting Windows with JavaScript
- F. Windows, Functions and Variables

**X. Custom JavaScript Objects**

- A. Creating Custom Objects
- B. Custom Object Demonstration
- C. Creating a JavaScript Object: The Constructor
- D. Creating an Instance of a Custom Object
- E. Creating Object Methods
- F. Creating Functions for Your Objects
- G. Complex Custom Objects

**Appendixes**

**Glossary**

