

## JavaScript for Web Development: Hands-On - 4 Days

### *Course 489 Overview*

- You Will Learn How To**
- Write and debug client-side JavaScript using proven development techniques
  - Add interactivity and dynamic graphics
  - Create interactive forms that capture and validate user input
  - Develop DHTML Web pages
  - Personalize pages using cookies
  - Leverage the power of unobtrusive JavaScript and Ajax
- Course Benefits** Visually exciting and compelling Web pages are key components to a successful Web strategy. This course provides in-depth hands-on experience writing client-side JavaScript. You learn how to integrate JavaScript into your Web pages and create an interactive and dynamic Web site. You also learn how to take advantage of best practices and development techniques.
- Who Should Attend** Those involved in establishing, developing or maintaining a Web site. Experience developing Web pages with HTML at the level of Course 470, "Developing a Web Site," is assumed. An understanding of programming concepts is helpful.
- Hands-On Training** An evolving case study transforms a static Web site into a dynamic site using JavaScript. Exercises include:
- Creating rollover graphic effects
  - Preloading images to speed up rollover and animation effects
  - Creating interactive, self-validating forms
  - Implementing an interactive user interface using alert, confirm and prompt dialog boxes
  - Incorporating DHTML effects into your Web pages
  - Implementing animations using JavaScript
  - Building drop-down menus
  - Using cookies to personalize pages

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## Course 489 Outline

### Introduction and Overview

#### What is JavaScript?

- Capabilities of JavaScript
- Surveying the limitations

#### Applications of JavaScript

- Client-side
- Server-side
- Writing compliant JavaScript for cross browser support

### Fundamentals of JavaScript

#### The JavaScript programming model

- Formatting and coding conventions
- Embedding JavaScript in HTML

#### JavaScript syntax

- Declaring variables and arrays
- Statements, operators and relational expressions
- Making decisions with **if** and **else**
- Performing loops with **while** and **for**
- Defining and invoking functions

#### Using built-in objects

- The String object and string manipulations
- The Date object
- Dynamically updating a Web page using the document object
- Accessing Web page elements

### Writing Client-Side JavaScript

#### Creating eye-catching animation and graphics

- Developing dynamic links
- Creating rollover graphics
- Using off-screen images for animation
- Manipulating images dynamically

#### Interacting with the browser

- Utilizing browser objects
- Using pop-up dialog boxes and prompting users for input
- Opening, closing and writing to new browser windows
- Manipulating dates and times
- Writing to the browser status line
- Determining browser type and version

#### Handling browser events

- Trapping the JavaScript event handlers
- Triggering interaction with user actions
- Scheduling future tasks with timer events

#### Using cookies for persistence

- How cookies operate
- Creating, reading and manipulating cookies
- Implementing personalization with cookies

#### JavaScript security

- Denial-of-service and spoofing attacks
- Security holes and browser policies

### Creating Intelligent Forms

#### Client-side form validation

- Accessing and modifying form fields with JavaScript
- Checking form fields on the fly
- Validating user input with client-side scripts
- Accessing drop-down select box options
- Controlling form submission

#### Enhancing the user experience

- Validating forms at the earliest opportunity
- Reducing response times for incorrectly filled-out forms

#### Adding interactivity to forms

- Assigning JavaScript functions to form elements
- Implementing a drop-down menu for site navigation
- Performing actions based on form events
- Form validation best practices

### Creating Web Pages Using Dynamic HTML

#### Overview of DHTML

- Using Cascading Style Sheets (CSS)
- Capabilities of DHTML
- DHTML and the Document Object Model (DOM)

#### Implementing DHTML

- Dynamically repositioning elements on a page
- Dynamically modifying documents
- Manipulating images
- Collapsible outlines, dynamic document reflow and inner HTML

#### Complementary Technologies

- Highlighting functionality of available JavaScript libraries
- Introducing unobtrusive JavaScript
- Separating JavaScript from the Web page

- Exploring the operation of Ajax