

# JavaScript Web Page Programming

CDT755

This course makes extensive use of hands-on examples and exercises in order to teach web page developers how to create more robust and dynamic web pages using the JavaScript programming language. Participants will learn how to write functions, how to respond to user initiated events, how to validate user input to web pages, and how to provide feedback via dialog boxes and alert controls

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## Audience

- Web page developers
- Beginning JavaScript Programmers

## Prerequisites

- CDT750, HTML/XHTML Web Page Development with CSS (or equivalent)

## Course Length

- Three Days

## Teaching Methods

- Lecture
- Hands-on examples
- Supplemental exercises

## Learning Objectives

- Create interactive Web pages
- Add an image rollover to a Web page
- Open and close browser windows under program control
- Add form controls to web pages
- Validate, format and navigate using form data
- Respond to events that occur on windows, forms, mouse and keyboard
- Create, read and delete browser cookies
- Create pull down and sliding menus
- Manipulate the HTML/XHTML document directly by adding, deleting, inserting and replacing nodes

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## Course Outline

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### Introduction

- What JavaScript Is
- Where to Put Your Scripts
- Hiding Scripts from Old Browsers
- Putting Comments in Scripts
- Alerting the User
- Confirming the User's Choice
- Prompting the User
- Redirecting the User
- Browser Detection

### Language Essentials

- Plug-In Detection
- Using For/In Loops
- Using Do/While Loops
- Functions
- Multi-Level Conditionals
- Functions That Return Values
- Handling Errors
- Putting More Than One Script on a Page
- Status Bar Messages

### Image Manipulation

- Creating Rollovers
- Creating More Effective Rollovers
- Putting Multiple Rollovers on a Page
- Displaying a Random Image

### Working with Browser Windows

- Opening a New Window
- Closing a Window
- Loading Different Contents into a Window
- Updating One Window from Another
- Creating New Pages with JavaScript

### Form Handling

- Verifying Passwords
- Select and Go Navigation
- Selecting Menu Items
- Working with Radio Buttons

### Forms and Regular Expressions

- Validating Email Addresses
- Validating a File Name
- Formatting and Validating Strings

### Making Your Pages Dynamic

- Putting the Current Date into a Web Page
- Writing Text into a Document on the Fly

### Handling Events

- Window Event Handling
- Mouse Event Handling
- Form Event Handling
- Key Event Handling

### JavaScript and Cookies

- Baking Your First Cookie
- Reading a Cookie
- Showing Your Cookies
- Deleting Cookies
- Handling Multiple Cookies

### User Interface Design with JavaScript

- Pull Down Menus
- Sliding Menus

### Manipulating Nodes

- Adding Nodes
- Deleting Nodes
- Inserting Nodes
- Replacing Nodes