

## Introduction to JavaScript

### Course Summary

#### Description

This course introduces students to the JavaScript language and its use in developing interactive web pages. The student will learn how to use variables, operators, and conditional statements in their scripts. Hands-on labs will teach how to work with flow control, validate user input in forms, react to events such as a mouse click, and controlling the opening and closing of windows.

#### Objectives

After taking this course, students will be able to:

- What JavaScript is and its use in web page design
- How to use variables, operators, and conditional statements
- What a function is and how to use them
- How to work with strings and string methods
- How to validate form elements
- How to attach events to elements
- How to open and close windows

#### Topics

- What is JavaScript?
- Variables, Data Types, and Loose Typing
- Operators
- Functions
- Conditional Statements and Loops
- Strings
- Forms Contents
- Event Handlers
- Window Control

#### Audience

This course is designed for web developers who need to use JavaScript in their web pages.

#### Prerequisites

Before taking this course, students should have knowledge of HTML and a basic understanding of web page objects.

#### Duration

Three days

## Introduction to JavaScript

### Course Outline

- I. What is JavaScript?**
  - A. JavaScript Defined
  - B. JavaScript vs. Java
  - C. Embedding JavaScript in HTML
  - D. Using Comments
- II. Variables, Data Types, and Loose Typing**
  - A. Variables
  - B. Variable Scope
  - C. Understanding Data Types
- III. Operators**
  - A. Operator Overview
  - B. Mathematical Operators
  - C. Assignment Operators
  - D. Comparison Operators
  - E. Logical Operators
  - F. Bitwise Operators
- IV. Functions**
  - A. Function Overview
  - B. Functions Definition
  - C. Using Functions
  - D. Passing Parameters
  - E. Predefined Functions
- V. Conditional Statements and Loops**
  - A. if and if...else Statements
  - B. Conditional Statement
  - C. for Loops
  - D. while Loops
  - E. do while Loops
  - F. break and continue Statements
  - G. switch Statements
- VI. Strings**
  - A. String Overview
  - B. Common String Properties
  - C. Common String Methods
- VII. Form Contents**
  - A. Form Elements
  - B. Form Referencing – Name/Array
  - C. HTML Form Structure
  - D. Basic Form Elements
  - E. Radio/Checkbox Element
  - F. Select Elements
  - G. Putting it all together with JavaScript
- VIII. Event Handlers**
  - A. Event Handlers Overview
  - B. Common Event Handlers
  - C. Mouse Event Handlers
  - D. Keyboard Event Handlers
  - E. Object Event Handlers
  - F. Form Event Handlers
  - G. Drag Event Handlers
  - H. Copy Event Handlers
- IX. Window Control**
  - A. Overview
  - B. Prompt Method
  - C. Confirm Method
  - D. Alert Method
  - E. Opening and Closing Windows