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## Web Development 2 with HTML5,CSS3 and JavaScript

**Duration: 5 Days    Course Code: WEBDEV2    Delivery Method: Virtual Learning**

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### Overview:

The Web Development 2 with HTML5,CSS3 and JavaScript course comprises sessions dealing with HTML5,CSS3 and JavaScript. It builds on the skills and knowledge gained by attendance on the Web Development 1 course by covering that which is new in HTML version 5 and CSS version 3,and advanced JavaScript topics.

Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

### Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

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### Target Audience:

The Web Development 2 with HTML5,CSS3 and JavaScript course is designed for developers familiar with HTML,CSS,and JavaScript,but whom are unfamiliar with the features introduced with HTML5 and CSS3,and are similarly unfamiliar with advanced JavaScript topics and modern approaches such as functional and reactive programming.

The course will also benefit those JavaScript developers who are familiar with JavaScript as it relates to ECMAScript version 5,and want to learn about what's new in ECMAScript version 6 (ES2015).

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### Objectives:

- This course aims to provide the delegate with the knowledge to be able to integrate into a website HTML5 and CSS3 features such as audio and video,media queries,drag and drop,and web sockets. It also aims to enable the delegate to be able to interpret,write,and troubleshoot complex JavaScript code exploiting strict mode,closures,IIFEs,ES6,functional programming,asynchronous JavaScript,and reactive programming.
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### Prerequisites:

Delegates should be able to:

- Build and style simple web pages using HTML & CSS
  - Build JavaScript applications that exploit all fundamental elements of the language including variables and expressions,conditions and loops,functions,objects,arrays,the DOM,and event handling
- This knowledge can be obtained by attendance on the pre-requisite HTML & CSS and JavaScript 1 courses.
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### Follow-on-Courses:

- jQuery Web Development (JQWD)
  - Bootstrap (BOOTS)
  - React (REACT)
  - Angular Development (ANGDEV)
  - Aurelia Framework (AUR)
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## Content:

### Web Development 2 with HTML5,CSS3 and JavaScript Training Course Course Contents - DAY 1

#### Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

#### Session 1: INTRODUCTION

- What is HTML5
- What is CSS3
- Browser Support

#### Session 2: HTML5 ELEMENTS ; ATTRIBUTES

- Form Fields
- PForm Validation
- Semantic Elements
- iFrame
- Audio and Video
- Canvas and SVG

#### Session 3: CSS3 STYLES

- Generic Styles
- Transforms
- Transitions
- Animations

#### Session 4: CSS3 RESPONSIVE

- Responsive Web Design (Review)
- Responsive Grid Layout
- Media Queries
- Images and Videos
- Responsive Web Design Frameworks  
Web Development 2 with HTML5,CSS3 and JavaScript Training Course Course Contents - DAY 2

#### Session 5: GEOLOCATION

- Information Sources
- The navigator Object
- Request Parameters
- Position Data
- Error Handling

#### Session 6: DRAG ; DROP

- Source and Target Elements
- Draggable Attributes
- Drag Events
- The dataTransfer object

#### Session 7: OFFLINE STORAGE

- Local/Session Storage vs. Cookies
- The localStorage and sessionStorage Objects
- Local/sessionStorage methods
- The applicationCache object and events

#### Session 8: WEBSOCKET

- WebSocket vs. HTTP
- WebSocket (ws://) Protocol
- The WebSocket constructor function
- WebSocket Object Methods
- WebSocket Events

#### Session 9: SERVER SENT EVENTS

- Server Sent Events
- The EventSource constructor function
- EventSource Events

#### Session 10: CROSS DOMAIN MESSAGING

- Same Origin Policy (SOP)
- Cross Domain Messaging
- Message Posting
- Message Receiving  
Web Development 2 with HTML5,CSS3 and JavaScript Training Course Course Contents - DAY 3

#### Session 11: VALUES ; REFS

- Primitive and Reference Types
- Equality Tests
- Deletion and Dereferencing
- Undefined,null,and NaN

#### Session 12: STRICT MODE

- What is Strict Mode
- Invocation
- Mistakes to Errors
- Variable Simplification
- Eval
- Security

#### Session 13: ARRAYS

- Associative Arrays
- for vs. for in
- delete and length

#### Session 14: SCOPE

- Hoisting (Review)
- Lexical Scope
- The Scope Chain
- Closures
- IIFEs  
Web Development 2 with HTML5,CSS3 and JavaScript Training Course Course Contents - DAY 4

#### Session 15: ES6 (ES2015)

- Multi-line Strings
- Template Literals
- Destructuring
- Spread and Rest Operators
- let and const
- Default Parameters
- Arrow Functions
- Iterators and Generators
- Decorators (ES7)
- Maps and Sets
- Classes and Modules
- Exports and Imports

#### Session 16: FUNCTIONAL JAVASCRIPT

- Higher Order Functions
- Pure Functions
- Immutability
- Currying
- Array Methods
- Arrow Functions (again)
- Method Chaining
- Function Composition and Pipelines  
Web Development 2 with HTML5,CSS3 and JavaScript Training Course Course Contents - DAY 5

#### Session 17: ASYNCHRONOUS JAVASCRIPT

- Synchronous vs. Asynchronous
- setTimeout
- AJAX
- Callbacks
- Common Problems
- Async.js
- Promises (ES6)

#### Session 18: REACTIVE JAVASCRIPT

- About RxJS
- Streams
- Observables
- Observers and Subscriptions
- Sequencing

- Handling user input and asynchronous calls
- Combining Streams
- Buffering
- Error Handling

#### Session 19: UNIT TESTING

- What is Unit Testing
- Test Driven Development
- Unit Testing with Jasmine

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### Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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