Developing Rich Internet Applications Using HTML5, CSS3 and jQuery

Duration: 5 Days

US Price: $2795 *California residents and government employees call for pricing.*

UK Price: £1,995 *Prices are subject to VAT*

CA Price: CDN$3,275 *Prices are subject to GST/HST*

Discounts: We offer multiple discount options. Click here for more info.

Delivery Options: Attend face-to-face in the classroom or remote-live attendance.

Course Description

The course provides a thorough introduction into the use of HTML5, CSS3 and jQuery to create Web sites that target the capabilities of modern browsers. HTML5 includes new structural and form elements, implementation of audio and video elements, and intrinsic APIs that offer features such as determining user location, Web storage, and dynamic creation of graphics using Canvas. CSS3 introduces new selectors and properties, creation of drop shadows, text shadows, rounded corners and gradient backgrounds without the use of an image editor, as well as simple animated effects without the use of JavaScript or Flash.

The course covers the jQuery library, DOM manipulation, Ajax requests, and an overview of the UI library. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

Course Prerequisites

Knowledge of HTML, CSS and JavaScript equivalent to attending the Website Development with HTML5, CSS and Bootstrap and JavaScript Programming courses.

Course Overview

HTML5 Fundamentals

- Overview of HTML5
- Comparing HTML5 to XHTML
- Changes to Existing Tags
- Deprecated Elements and Attributes
- Browser Support
- Modernizr JavaScript Library
- HTML5 Shiv and Polyfills

HTML5 Structural Elements

- New Block-Level Semantic Elements
    - `<header>`
    - `<footer>`
    - `<section>`
    - `<article>`
    - `<nav>`
    - `<aside>`
    - `<figure>` and `<figcaption>`
- New Text-Level Semantic Elements
    - `<time>`
    - `<meter>`
    - `<details>`
    - `<summary>`
    - `<mark>`
- Creating a Document Outline

Audio and Video

- Browser Support for Audio/Video Formats
    - Supplying Fallbacks
- `<audio>` and `<video>` Elements
- `<source>` Element
- Media Element API and Events
    - Creating Your Own Control Panel
    - Effecting the Volume and Playback Rate

HTML5 Web Forms

- New Form Attributes
    - `autocomplete`
    - `novalidate`
- New Input Attributes
    - `autofocus`
    - `form`
- New Form Elements
    - `<datalist>`
    - `<progress>`
- New Input Elements
    - `email`
    - `url`
    - `tel`
    - `search`
- Form Validation
    - `pattern` and `required` Attributes

HTML5 JavaScript APIs

- Web Storage API
    - Local Storage
    - Session Storage
- Geolocation API

HTML5 Canvas API

- `<canvas>` Element
- Comparing Canvas and SVG
- Using the Canvas API
    - Drawing Basic and Complex Shapes
    - Setting Colors and Styles
    - Adding Text to the Canvas

- Adding Images to the Canvas
- Allowing the User to Draw on the Canvas
- Saving the Canvas

Introduction to CSS3

- What's New in CSS3?
- Benefits of Using CSS3
- Browser Support
- Vendor Prefixes

CSS3 Selectors and Pseudo-Classes

- New Attribute Selectors
    - "Starts With" Selector
    - "Ends With" Selector
    - "Contains" Selector
- Selecting the nth Element
- Selecting the nth of a Type

CSS3 Properties

- Using `@font-face` to Add Custom Fonts
- Changing the Opacity of Text and Images
- Creating Rounded Corners, Adding Shadows to Boxes, and Using Images as Borders
- Creating Multiple Columns for Laying Out Text
- Working with RGBA and HSL Color Models
- Creating Simple Animations Using `transitions`, `transform`, and `animation`

jQuery Fundamentals

- Overview of jQuery
- Downloading and Using jQuery library
- Benefits of Using jQuery
- Uses of the jQuery function

jQuery Selectors and Filters

- Ready Handler
- Using jQuery Selectors and Filters
- Selecting Single and Multiple Elements
- Operating on Wrapped Sets
- Method Chaining

DOM Manipulation

- Accessing Attributes of an Element
- Adding and Removing Elements
- Setting Element Content With `text()` and `html()`
- Manipulating Classes and CSS

jQuery Events

- jQuery Event Model
- Binding and Removing Event Handlers with `on()` and `off()`
- Delegated and Direct Events
- Event Object
- Common jQuery Events

Page Animation with Effects

- Controlling Visibility Using `show()` and `hide()`
- Creating Slide and Fade Effects
- Creating Custom Animations
- Animation Queuing and Callback Functions

Ajax Requests Using jQuery

jQuery Form Enhancement

- Ajax Overview
- Loading Remote HTML
- Making Ajax Requests Using the `$.ajax()` Function
- Using the `$.get()` and `$.post()` Functions

- Using Form Selectors and Filters
- Handling Keyboard and Focus Events
- Improving Behavior and Appearance
- Performing Form Validation
- Using the Validation Plugin

Utility Functions

- Disabling Animations
- Using Other Libraries with jQuery
- String and Array Manipulation

jQuery Plugins

- Benefits of Plugins
- Integrating Popular Plugins
- Image Manipulation with Slideshows and Carousels
- Creating Custom Plugins

jQuery UI Overview

- Configuring and Downloading the UI Library
- Themes and Styles
- Using ThemeRoller
- Overview of UI Widgets