Developing Rich Internet Applications Using HTML5, CSS3 and jQuery

Duration: 5 Days

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

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

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

Students Will Learn

- Using the new HTML5 semantic elements to define the structure of a page

- Adding video and audio to a Web page

- Using the new form input types and form attributes

- Using client-side form validation features within HTML5

- Adding dynamic graphics to a Web page using Canvas

- Using the new attribute selectors and pseudo-classes in CSS3

- Creating effects with CSS3 such as drop shadows, text shadows and using custom fonts

- Referencing jQuery in a Page

- Selecting page elements using jQuery selectors

- Selecting DOM elements using standard DOM methods

- Creating and using jQuery plugins

- Registering events in jQuery

- Setting CSS properties of page elements

- Making Ajax requests using the `$.ajax` function

- Changing the display style of an element using various effect methods

Course Description

This hands on course is intended for experienced Web designers and developers who wish to exploit HTML5 and jQuery to create feature-rich, dynamic Web sites. 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.

jQuery simplifies client-side scripting via a series of open-source libraries that provide

frameworks for enhanced functionality. 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.

This course includes an introduction into the new features provided by HTML5 and CSS3. Those already familiar with HTML5 and CSS3 should register for the 3-day [jQuery Programming]() course. Students who are not familiar with HTML, CSS and JavaScript should instead register for the courses [Website Development with HTML5, CSS and Bootstrap]() and [JavaScript Programming]() followed by the [jQuery Programming]() course.

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

Page Animation with Effects

- Controlling Visibility Using `show()` and

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

Ajax Requests Using jQuery

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

Utility Functions

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

jQuery UI Overview

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

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

jQuery Form Enhancement

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

jQuery Plugins

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