Developing Mobile Websites with Responsive Web Design and jQuery Mobile

Duration: 35 hours

Prerequisites: Knowledge of HTML, CSS, JavaScript and jQuery

Course Description: This hands-on course conveys the fundamental skills necessary to design and build responsive web sites for mobile devices such as phones and tablets. Attendees will use responsive web design (RWD) techniques such as CSS3 media queries and flexible layouts to build mobile-compatible web sites. Students will learn how to test mobile websites using emulators and simulators.

The course also provides an extensive introduction into using the jQuery Mobile Framework for building mobile-specific web sites. Students will learn how to use jQuery Mobile widgets to create forms, lists, toolbars and collapsible blocks. Students will also learn how to integrate SOA with a mobile web site including working with RSS feeds, Google Maps integration and implementing server-side data access.

Attendees will use ThemeRoller for jQuery Mobile to download existing or custom theme swatches to format the appearance of a web site. Additional topics include responding to user events, configuring jQuery Mobile defaults and using page transitions. Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency.

Students Will Learn

- Overview of HTML5
- Design Strategies and Layout
- Using the Viewport and Media Queries
- Responsive Typography and Media
- Responsive Design Approaches to Navigation and Layout
- Responsive Design Approaches to Tables and Forms
- Mobile-Related APIs
- Additional HTML5 APIs
- Introduction to jQuery Mobile
- Styling jQuery Mobile Pages with Themes
- Working with jQuery Mobile Pages
- Working with Toolbars
- Adding Content to a jQuery Mobile Page
- Listviews
- jQuery Mobile JavaScript API
- Working with Events in jQuery Mobile
- Formatting Page Content
- Adding Dialogs and Popups
- Integrating Panels
- Displaying Tabbed Content
- Creating Responsive Tables in jQuery Mobile
- Adding Collapsible Content
- Using the Filterable Widget
- Creating Forms in jQuery Mobile

Overview

Overview of Responsive Web Design

- What is the Mobile Web?
- Defining Responsive Design
- Responsive Web Design (RWD) Principles
- Responsive Layout vs. Adaptive Layout
- Designing for Mobile First
- Progressive Enhancement

Viewport and Media Queries

- Working with Viewports
  - `viewport` Meta Tag
  - `@viewport` Rule
- CSS3 Media Queries
  - Media Types
  - Logical Operators
  - Media Features
    - Browser Height and Height
    - Device Height and Height
    - Orientation
    - Resolution
- Determining Breakpoints
- Installing and Using Viewport Testing Tools

Creating Responsive Layouts

- Fluid Grid Layouts
  - Calculating Fluid Grid Layouts
  - Predefined Grid Systems
- Creating Flexible Images and Video
- Optimizing Images for Retina Displays
- Responsive Typography
  - Using Ems, Percentages and Rems
  - Viewport Units
- Responsive Navigation Patterns
- Designing Responsive Tables
- Creating a Responsive HTML5 Page

Overview of jQuery Mobile

- What is jQuery Mobile?
- Configuring and Downloading the Mobile Library
- jQuery Mobile File Structure
- Working with HTML5 `data-` Attributes
- jQuery Mobile Page Structure

Overview of the jQuery Mobile CSS Framework

- Explanation of Themes and Swatches
  - Applying the "a" and "b" Swatches
- Using the `data-theme` Attribute
- Overview of jQuery Mobile Intrinsic Classes
- Using ThemeRoller for jQuery Mobile
  - Exploring the ThemeRoller UI
  - Upgrading Existing Themes
  - Defining Custom Swatches
  - Downloading and Applying a Custom Theme

Creating jQuery Mobile Pages

- Overview of the Page and Pagecontainer Widgets
- Using Single-Page vs. Multi-Page Templates
- Prefetching Pages
- Caching Pages in the DOM
- Configuring the Loader Widget
- Navigating Between Pages
  - Using Page Transitions
  - Ajax-Driven Page Navigation
  - Hash-based Navigation
- Displaying Pages as Dialogs

Adding Content to a Page

- Adding Specialized Hyperlinks
  - Maps
  - Email
  - Phone
- Integrating with Web Services

Using jQuery Mobile Widgets

- Examining the Widget Factory
  - Instantiating a Widget
  - Calling Widget Methods
  - Setting Widget Options
  - Registering Widget Events

Making Ajax Requests
- Displaying XML Content
- Displaying JSON Content
- Working with Multimedia
- Organizing Content with Grids
- Creating Responsive Grids

Adding Toolbars to a Page

- Adding Headers and Footers
- Positioning Toolbars
    - Inline
    - Fixed
    - Fullscreen
- Auto-Generated and Customized Back Buttons
- Adding Content to Toolbars
- Using the Navbar Widget
- Persisting Toolbars Across Pages

Working with Forms

- jQuery Mobile Form Requirements
- Form Auto-Enhancements
    - Textinput Widget
    - Checkboxradio Widget
    - Selectmenu Widget
    - Slider Widget
    - Rangeslider Widget
- Creating Accessible Forms
- Defining Field Containers
- Grouping Controls with the Controlgroup Widget
- Adding Input Fields
    - Single-line and Multi-line Text Fields
    - Email, Telephone and Search Fields
    - Checkboxes and Radio Buttons
- Working with Select Menus
    - Native Select Menu
    - Custom Select Menu
        - Allowing Multiple Selections
        - Disabling Menu Options
        - Adding Placeholders
- Using a Slider for Numeric Input
    - Controlling a Slider's Appearance
    - Using Slider Events
- Selecting a Range of Values with Rangeslider
- Creating a "Flip" Switch

Responding to Events

- Registering Event Handlers
- Comparison of `ready` and `pagecreate` Events

Configuring Widget Options using JavaScript
- Using the `data-role` Attribute to Create a Widget

Working with List Views

- Creating Lists with List Views
    - Read-only
    - Interactive
- Creating Numbered Lists
- Creating Inset and Non-Inset Lists
- Formatting List Content
    - Adding Images to Lists
    - Creating Split Buttons
    - Creating Count Bubbles
- Working with Nested Lists
- Defining a Filterable List

Working with Buttons

- Creating Buttons
    - Using the `<a>` Tag
    - Using the `<input>` Tag
    - Using the `<button>` Tag
- Defining Inline Buttons
- Creating Button Groups
- Configuring Buttons with Attributes and CSS Classes
- Formatting Buttons
    - Native Buttons
    - Inline Buttons
    - Adding/Removing Rounded Corners
    - Theming Buttons
    - Adding/Removing Drop Shadows
    - Minifying Buttons
    - Adding Icons

Integrating JavaScript and jQuery Mobile

- Configuring Default Settings Using the `$.mobile`

- Introduction to Page Events
- The `mobileinit` Event
- Registering Events in jQuery Mobile
  - Touch/Swipe
  - Orientation Change
  - Scroll
  - Virtual Mouse Events
  - Widget-specific events
    - Slider Widget
    - Tabs Widget
    - Collapsible Widget

Object
  - Enabling Ajax
  - Setting Default Page Transitions
  - Preventing Transitions
  - Preventing Auto-Enhancement
  - Customizing Error Messages
- Storing and Removing Arbitrary Data
  - Working with URLs
  - Performing a Silent Scroll
- Loading and Changing Page Content Dynamically

Creating Popups

- The Popup Widget
- Positioning Popups
- Dismissing a Popup
- Adding a Close Button
- Modal Popups
- Using Popups for Tooltips
- Embedding Content in Popups
  - Images
  - Video
  - Iframes
- Theming Popups
- Using Popups for Navigation
- Displaying Popup Transitions
- Reusing Popups on Multiple Pages

Adding Panels

- Using the Panel Widget
- Setting a Panel's Position
- Setting the Display Mode
  - Reveal
  - Overlay
  - Push
- Opening and Closing Panels
- Creating the Open Button
- Controlling Close Behavior
- Adding Fixed Panels
- Making Panels Responsive
- Reusing a Panel on Multiple Pages
- Updating a Panel Dynamically

Displaying Pages as Dialogs

- Dialog Overview
- Customizing a Dialog
  - Adding a Close Button
  - Theming
- Linking to the Dialog
- Chaining Dialogs Together
- Displaying Dialog Transitions

Creating a Tabbed Interface

- Using the Tabs Widget
- Creating Content Panels
- Defining the Tabs
  - Navbar
  - Listview
  - Buttons
- Configuring the Tabs Widget
  - Customizing Options
  - Handling Tab Events
  - Loading Content with Ajax

Creating Responsive Tables

- Using the Table Widget
- Overriding CSS Classes
- Reflow Table Mode
  - Applying the `ui-responsive` Class
- Column-Toggle Table Mode
  - Prioritizing Columns
  - Customizing the Columns button

Adding Collapsible Content

- Using the Collapsible Widget
- Controlling a Collapsible's Appearance
  - Adding a Theme
  - Using Custom Icons
  - Minified and Inset Collapsibles
- Opening a Collapsible by Default
- Nesting Collapsibles

Customizing the Appearance of the Column Picker Popup

Making Content Filterable

- Using the Filterable Widget
- Defining a Search Field
- Using "Reveal"
- Using a Remote Data Source
- Filtering on Alternative Text
- Controlling Filterable Items
- Defining a Custom Filter Function

Opening/Closing Programmatically
- Creating Groups of Collapsibles

Web Services Integration

- Working with RSS Feeds
- Google Maps Integration
- Server-Side Data Access

Related Bootcamp

Track	Duration	Price
Web Developer	119 hours	$3,580

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