

# Course Syllabuses

## Introduction to AngularJS

**Length:** 3 days

**Prerequisites:** Basic knowledge of web development and especially JavaScript.

**Objectives:** Students will learn to take advantage of AngularJS and gain practical skills for using it, along with deep understanding its fundamentals.

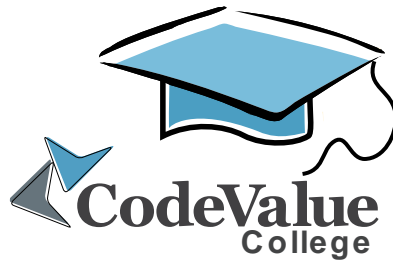
**Abstract:**

With the shifting of web application architecture to traditional client-server architecture, we've been witnessing a rise in client side javascript-based frameworks. One of the most popular frameworks out there is AngularJS which equips developers with a vast set of tools for creating great innovative web applications.

In this 2-day course you will learn the fundamentals of this incredible framework and get to try it out yourself. Come and learn how client side development is done today!

**Syllabus:**

- Module 1: AngularJS Overview
  - Overview of AngularJS
  - Data binding
  - M-V-C
  - Dependency Injection
  - Main components
  - Understanding Angular's digest loop
- Module 2: Better HTML
  - The scope object
    - Overview
    - The \$apply function
    - Pub-sub with \$on, \$broadcast and \$emit
  - Common angular attributes
    - ng-model
    - ng-repeat
    - ng-switch



- ng-show and ng-hide
    - ng-click
    - ng-src and ng-href
    - ng-options
    - ng-include
  - Filters
    - Using built-in filters
    - Creating custom filters
  - Animations
- Module 3: Services
  - Writing custom services
  - Built-in services:
    - Calling the server with the \$http and \$resource services
    - Running asynchronously with the \$q service
    - Logging with the \$log service
    - Templating with the \$compile service
    - Using \$window, \$document and \$timeout for better testing experience
- Module 4: Angular for Applications
  - Angular modules
  - Directives
    - What are directives?
    - Creating custom directives
  - Form validation
  - Routing, layouts and the \$location service
  - Exception handling
- Module 5: AngularJS Best Practices



## Beginning HTML5 and CSS3

**Length:** 3 days

**Prerequisites:** At least 1 year of experience in software development.

**Objectives:** Students will learn the fundamentals of JavaScript and learn to take advantage of the new features of HTML5 and CSS3.

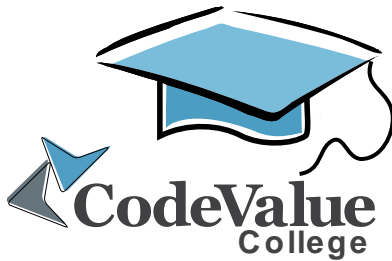
### **Abstract:**

HTML5 and CSS3 are the hottest buzz around. These technologies come with a promise we all have been dreaming about - make native web applications much easier to create and design.

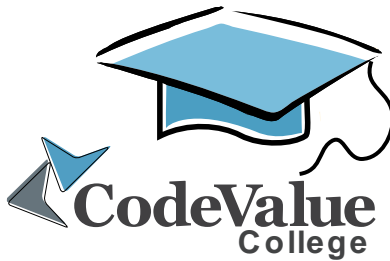
As the game changes they are, these new technologies bring a lot of new features and APIs. In this 3-day course, we will start from the fundamentals of HTML, JavaScript and CSS and move on to their new capabilities - we will learn how to use them as well as best practices for using them in the rapidly changing environment of the web.

### **Syllabus:**

- Module 1: The World Wide Web
  - History
  - How the Internet works?
- Module 2: HTML
  - Overview
  - HTML fundamentals
  - HTML5 markup.
- Module 3: CSS
  - Overview
  - Basic selectors
  - Pseudo-classes
  - Common style definitions
  - CSS3
    - New selectors
    - New element capabilities
    - Transformations
    - Animations
    - Web fonts.
- Module 4: JavaScript
  - Overview



- The HTML DOM
- Basic syntax
- Functions and objects
- OOP in JavaScript
- jQuery basics.
- Module 5: HTML5 Programming APIs
  - The canvas
  - Storage (Local storage, Session storage and Index DB)
  - Geolocation
  - Web sockets
  - Web workers
  - Offline Application API
  - Drag and Drop.
  - History API
  - HTML5 Compatibility –
    - Modernizr
    - Pollyfills



## Web Development with ASP.NET MVC

**Length:** 5 days

**Prerequisites:** At least 1 year of experience with .NET and C#.

**Objectives:** The participant will learn to create web applications using HTML, CSS and JavaScript on the client-side and ASP.NET MVC, ASP.NET WebAPI and SignalR on the server-side, with a deep understanding of the principals involved.

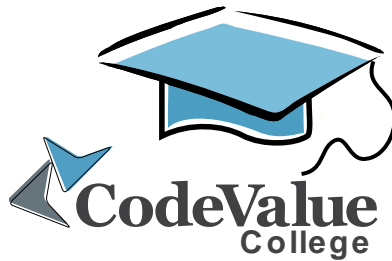
### Abstract:

In the last few years we've been witnessing a shift of numerous application types to the web. From Line-of-Business (LOB) applications to games, everyone is trying to get to the users through the Internet and still provide an appealing "look and feel". As a result of the rising demand in control over the application's output, different new web development frameworks started popping out and one of them was ASP.NET MVC. This exciting framework takes an entirely different approach upon web development which fits better to the requirements from web developers nowadays, follow best practices and design principles in server-side code and generate optimized client-side output for the users.

In this 5-day course we will go through the fundamentals of web development – HTML, CSS and JavaScript and move forward to back them up from the server side with ASP.NET MVC, ASP.NET WebAPI and SignalR.

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  - Overview
  - HTML fundamentals
  - HTML5 markup.
- Module 3: CSS
  - Overview
  - Basic selectors
  - Pseudo-classes
  - Common style definitions



- CSS3
  - New selectors
  - New element capabilities
  - Transformations
  - Animations
  - Web fonts.
- Module 4: JavaScript
  - Overview
  - The HTML DOM
  - Basic syntax
  - Functions and objects
  - OOP in JavaScript
  - jQuery basics.
- Module 5: ASP.NET MVC
  - Overview
  - Routing
  - The Model
  - The Controller
    - Actions
    - Model binding
    - Filters
    - The different return values
  - The View
    - Introduction to the Razor syntax
    - HTML helpers
    - Writing custom HTML helpers in Razor and in C#
  - Form Validation
  - AJAX
- Module 6: ASP.NET WebAPI
  - Overview
  - Routing
  - Controllers and Actions
  - Message Handlers
  - Model bindings
- Module 7: SignalR
  - Overview
  - Hubs and hub proxies
  - Persistent connections