

## NE2203 – ASP.NET AJAX and ASP.NET MVC

<b>Course Synopsis</b>	<b>Duration:</b>	Five (5) days.
	<b>Audience:</b>	Individuals who need a good understanding of developing AJAX enabled ASP.NET applications and ASP.NET MVC applications; suitable for managers with a technical orientation and developers with some ASP.NET background.
	<b>Prerequisites:</b>	Background in web development using ASP.NET. and intermediate-level knowledge of C#
	<b>Delivery Method:</b>	Instructor led, Hands-on workshops

<b>Brief Description</b>	<p><i>This course covers two new popular technologies: AJAX toolkit and its use in ASP.NET Web forms development, and the ASP.NET MVC.</i></p> <p><i>It starts out with a quick overview of the prerequisite JavaScript, DOM, and XML technologies followed by an explanation of the key AJAX component called XmlHttpRequest.</i></p> <p><i>Next, we introduce the AJAX Control Toolkit, explain its architecture, the associated AJAX JavaScript control library, work through examples of different controls in the control toolkit, and cover the communication of AJAX controls with data from JSON Web Services.</i></p> <p><i>The second part of the course introduces the ASP.NET MVC Framework and explains its architecture by creating some MVC applications. Since MVC relies on Lambda expressions and LINQ, we also present some background material on LINQ, proper design of MVC applications with model binding, and LINQ based data tiers.</i></p> <p><i>Finally, we cover test development for a sample MVC application.</i></p>
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<b>Topics Covered</b>	<p><b>I. AJAX Fundamentals</b></p> <ul style="list-style-type: none"> <li>• Programming the XmlHttpRequest component using JavaScript</li> <li>• Downloading XML from the server and providing silent updates in the browser</li> <li>• Examples of AJAX enabled web pages</li> <li>• Example of an AJAX enabled ASP.NET messaging application that uses XmlHttpRequest and XML server data</li> </ul> <p><b>II. AJAX Control Toolkit with ASP.NET – Control Library</b></p> <ul style="list-style-type: none"> <li>• Setting up ASP.NET Ajax Control Toolkit and Extensions</li> <li>• ASP.NET AJAX Client library</li> <li>• JavaScript language extensions</li> <li>• Infrastructure for extensions</li> <li>• Object-Oriented extension</li> <li>• Core components in control library</li> <li>• The Sys.Application object</li> <li>• The Sys.Component object</li> <li>• The network stack, user-interface components</li> </ul>	<p><b>III. AJAX Control Toolkit with ASP.NET – Controls</b></p> <ul style="list-style-type: none"> <li>• The ASP.NET ScriptManager control</li> <li>• Script loading</li> <li>• Script Error Handling</li> <li>• Partial page updates and the update progress control</li> <li>• Triggering periodic partial updates</li> <li>• ASP.NET AJAX Toolkit Controls</li> <li>• UI Effect, Popup Controls</li> <li>• Accordion control</li> <li>• Rating control</li> <li>• ReorderList control</li> <li>• Autocomplete control</li> <li>• Calendar control</li> <li>• Generalities of the ReorderList Control</li> <li>• TabContainer control</li> </ul>
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**NE2203 – ASP.NET AJAX and ASP.NET MVC****Topics  
Covered Continued****IV. The AJAX Control Toolkit Extenders**

- Panel Extenders
- Button Extenders
- Pop-up Extenders
- User-Interface Extenders
- Input Extenders
- Animation Extenders

**V. ASP.Net AJAX WebRequest Calls**

- Timeout limits
- Serializing data
- JSON format
- Serialization

**VI. Lambda Expressions and LINQ**

- LINQ for Objects
- LINQ for SQL
- LINQ to SQL classes

**VII. ASP.NET MVC**

- Architecture of ASP.NET MVC applications
- Creating ASP.NET MVC applications
- Understanding routing in ASP.NET MVC
- Model binding to Views
- Design of appropriate models

**VIII. Security in ASP.NET MVC**

- Basic security in ASP.NET views
- Implementing Role based security in MVC

**IX. Testing of ASP.NET MVC Applications**

- Creating Unit tests for Controllers
- Testing of Sessions and Role Based security through Mock objects

**X. AJAX in ASP.NET MVC Applications**

- JQuery and its use in ASP.NET MVC

**XI. Design of a Complete MVC Application Including its Test Development**