

# Technical Training Solutions



## ASP .NET AJAX BOOT CAMP (USING VB .NET) (3 Day Course)

Technical  
Course  
Outline

### COURSE SUMMARY

AJAX (“Asynchronous JavaScript API for XML”) is an exciting web application technology that, along with a rich set of development tools, is becoming an indispensable element for providing rich web client applications.

This course provides hands-on experience working with Microsoft’s ASP.NET AJAX Script Library, Extensions, & Toolkit. Students will learn about the fundamental technologies required to build custom AJAX applications, how to debug AJAX application code, how to use various ASP.NET AJAX controls & scripts, how to incorporate AJAX into Web Services and much more. If you’re serious about learning how to AJAX-enable ASP.NET Websites, this class will provide the skills you need!

### INTENDED AUDIENCE:

AJAX relies heavily upon client-side scripting and an understanding of the request/response nature of the web. As a consequence of this, this course is geared towards *current web developers who have a solid understanding of client-side web development technologies such as: HTML, XHTML, JavaScript and CSS as well as ASP .NET and VB .NET programming experience using Visual Studio.*

### PREREQUISITES:

To ensure the best learning experience for all participants, the following pre-requisites *must be met* in order to participate in this course:

- Successful completion of *or* proficiency with the topics from:
  - **Advanced XHTML, HTML & CSS**
  - **Introduction JavaScript**
  - **“VB .NET Fundamentals”**
  - **“ASP .NET Fundamentals”**

### COURSE CONTENTS:

- **Life Before AJAX (Overview/Demonstration/Discussion)**
  - HTTPRequest/HTTPResponse & HTML
  - JavaScript & ECMAScript
  - The W3C Document Object Model (DOM) Standard
  - CSS & DHTML
  - XHTML
- **Understanding AJAX Technologies & Architectures**
  - The XmlHttpRequest Control
  - Microsoft AJAX Script Library
    - Cross-Browser Issues
  - ASP .NET AJAX Extensions
  - ASP .NET AJAX Control Toolkit
    - ASP .NET AJAX Control Extenders
  - JavaScript in Assemblies
  - Providing a ScriptReference
  - Embedded JavaScript Files
- **The ASP.NET AJAX Script Library**
  - What Is The AJAX Library?
  - The AJAX Library Namespaces
  - Implementing Global Shortcut Functions
  - Canceling Duplicate Asynchronous Requests
  - Aborting In-Process Asynchronous Requests
  - Writing Custom AJAX Scripts
- **Microsoft’s ASP.NET AJAX Extensions**
  - Microsoft’s Core vs. Extended AJAX Technologies
  - AJAX Assemblies Installed In The GAC
  - Managing AJAX Scripts With The ScriptManager
  - Partial Page Rendering
    - The UpdatePanel Control
      - Properties & Methods
      - UpdatePanel Request Stages
        - Initializing, Loading, Completing
      - Using Triggers
      - The PageRequestManager Class
  - Partial-Page Update Notifications With UpdateProgress
  - Implementing Timers To Automatically Refresh Data
- **Debugging ASP.NET AJAX Applications**
  - Understanding Different Debugging Tools
  - Debugging Inline & External Scripts
  - Viewing Request & Response Messages Using Fiddler
  - Working With The Sys.Debug Client-Side Class
- **The ASP.NET AJAX Control Toolkit (ACT)**
  - Installing & Configuring The ASP.NET AJAX Control Toolkit
    - AjaxControlToolkit.dll
  - Perform Advanced AJAX Functionality Using Toolkit Controls
    - Controls vs. Control Extenders
    - The TabBrowser Control
    - The Accordion Control
    - The CollapsePanel Control
    - The ModalPopup Extender Control
    - The CascadingDropDown Control Extender
    - The UpdateProgress Control
    - The MaskedEdit Control
    - The History Control
    - The Calendar Control
- **Calling Web Services Using ASP.NET AJAX**
  - Web Service Architecture & Key Technologies
  - Creating ASP.NET Web Services
  - Applying AJAX Web Service Attributes To Web Services
    - ScriptMethod Attribute
  - JavaScript Web Service Proxy Objects Using ScriptManager
    - Calling Web Services Using Proxies
  - Creating & Calling Page Methods
  - JavaScript Object Notation
    - Comparing JSON and SOAP
    - JSON Data Types
    - JSON Request/Response Messages
- **Use ASP.NET AJAX Application Services**
  - The AuthenticationService & ProfileService Client-Side Classes
  - Login Users Using AJAX & The ASP.NET Membership Provider
  - Log Users Out Of A System From The Client-Side
  - Access & Modify User Profiles From The Browser