ASP.NET Web Forms Programming Using C#

**Duration:** 5 Days

**US Price:** $2095

**Delivery Options:** Attend face-to-face in the classroom, remote-live or via on-demand training.

### Description

This course provides students with hands-on experience using Visual Studio to create dynamic Web sites with ASP.NET Web Forms and the .NET Framework using C#. The class provides a thorough introduction to the C# programming language, including coverage of the essentials of the C# programming language, built-in data types, operators, control structures, classes, and methods, collections, and exception handling.

Students then learn how to leverage the power of the .NET Framework to build Web user interfaces. Students will learn how to use the power of ASP.NET Web server controls combined with HTML5 to design Web pages. They will use ASP.NET Validation controls to provide both client-side and server-side validation for user input. Students will learn how to use master pages to enforce a consistent look and feel across a set of Web pages, as well as how to use user controls to reuse smaller pieces of HTML across multiple pages.

Students explore the complexities of state management in ASP.NET Web Forms and how to use session and view state objects to manage state between HTTP requests.

Students spend time exploring how to use ADO.NET to interact with databases by running SQL queries and executing stored procedures. They will also learn how to read/write XML files using DataSets and DataTables. Students learn how ASP.NET Web Forms data binding to easily display data in list controls, the GridView control, and the DetailsView control.

Microsoft provides support for Ajax-enabled Web Forms applications using the ASP.NET AJAX Framework. Students will learn how to use some of the server-side features to make asynchronous postbacks from the browser, perform partial page updates using the UpdatePanel, use CSS to dim a page during postback, and use the Timer to fetch data from the server asynchronously.

Other topics include: using a Web.config file to control application configuration; working with the query string; working with cookies; reading and writing files; and deploying
ASP.NET web applications. Comprehensive labs provide the students with extensive experience creating and deploying dynamic ASP.NET Web Form applications.

**Prerequisites**

Knowledge of fundamental HTML syntax is helpful, but not required. Prior experience with a scripting or programming language is required.

**Course Overview**

**Introduction to .NET**
- Overview of the .NET Framework
- How .NET is Different from Traditional Programming
- Common Language Runtime (CLR)
- Common Language Specification (CLS)
- Common Type System (CTS)
- .NET Assemblies
- Microsoft Intermediate Language (CIL)
- .NET Namespaces
- .NET Framework Class Library

**Introduction to Visual Studio**
- Creating a Project
- Using the Code Editor
- Correcting Syntax Errors
- Setting Project Properties
- Adding References
- Compiling a Program
- Running a Program
- Debugging a Program
- Using the MSDN (Help)

**Language Fundamentals**
- C# Program Structure
- Defining Namespaces
- Understanding C# Data Types
- Defining Variables and Constants
- Comparing Value Types vs. Reference Types
- Working with Operators and Expressions
- Performing Type Conversions
- Using Console I/O
- Formatting Numbers, Date and Times

**Conditionals and Looping**
- if/else
- switch
- while and do/while
- for
- foreach

**Methods and Parameters**
- Defining Static and Instance Methods
- Passing Parameters by value and by reference
- Overloading Methods
- Using Variable Length Parameter Lists

**Exception Handling**
- What are Exceptions?
- .NET Exception Hierarchy
- Catching Exceptions
- Throwing Exceptions
- Managing Resources with Finally

**Object-Oriented Programming**

**Collections**
### Maintaining State
- Maintaining State within ASP.NET Web Forms Applications
- Using the Session Object
- Using the ViewState Object
- Reading and Writing Cookies
- Using the Query String

### ADO.NET
- Understanding the ADO.NET Object Model
- Connected vs. Disconnected Access
- Using a Connection to Connect to a Data Source
- Using a Command to Execute Queries and Stored Procedures
- Using a DataReader to Work with Cursors
- Using a DataSet with Disconnected Data
- Using DataAdapters with DataSets

### Using XML
- Introducing XML and XML Schemas
- Writing XML Schemas with a DataSet
- Reading XML Schemas with a DataSet
- Writing XML Data with a DataSet
- Reading XML Data with a DataSet

### Using Data Binding
- Understanding ASP.NET Data Source Controls
- Configuring Data Sources
- Examining ASP.NET Data Bound Controls
- Using List Controls
- Using the GridView Control
- Using the DetailsView Control
- Exploring Other Data Bound Controls

### Introduction to ASP.NET AJAX
- Understanding Ajax
- Enabling ASP.NET AJAX with the ScriptManager
- Configuring Partial Page Updates with the UpdatePanel
- Displaying a Progress Indicator Using UpdateProgress
- Making Periodic Postbacks Using the Timer
- Using the NuGet Package Manager to Download jQuery

### Deploying ASP.NET Applications
- Configuring IIS for Deployment
- Configuring an ASP.NET Web Form Application for Deployment
- Using Publish to Deploy a ASP.NET Web Application