



Key Data

Course #: **5310C#**
Number of Days: **5**
Format: **Instructor-Led**

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Web Application Development Using C# and ASP .Net 2.0

Course Description

In this course, you'll learn how to use Visual Studio 2005 and Visual C# 2005 to build ASP.NET 2.0 Web pages and XML Web services. You'll gain an understanding of the new architecture behind ASP.NET 2.0 and how to use the new server controls. You'll learn to create consistent web sites using Master Pages, to improve performance with output caching, add membership features, configure and deploy ASP.NET applications, to authenticate users and limit their access to resources, direct users using new Site Navigation tools and to handle multi-user data access conflicts.

Audience

This course is intended for developers who are writing solutions using Microsoft application development technologies. This course assumes that the students are familiar with Hypertext Markup Language (HTML), client-side and server-side scripting, Visual Studio 2003 or Visual Studio 2005 and the Visual C# programming language. It is intended to be a general introduction to ASP.NET 2.0-based web development and does not assume previous ASP.NET development experience.

The Web developer is responsible for the design and implementation of a Web application and/or a Web solution. Typically, these individuals perform the following functions:

- Assist with the creation of functional specifications.
- Design and develop user interfaces (UIs).
- Create ASP.NET Pages.
- Write Web Forms applications.
- Create and test prototypes.

Prerequisites

Before attending this course, students must meet the following prerequisites:

- Ability to create HTML pages with tables, images, and forms.
- Experience using a scripting language, such as Microsoft Visual Basic® Scripting Edition or JavaScript.
- Familiarity with Visual C# and Visual Studio 2003 or 2005.
- Familiarity with the .NET Framework.

At Course Completion

After completing this course, students will be able to:

- Use ASP.NET server controls to generate HTML and to execute event procedures
- Promote consistency within your web site through Master Pages
- Retrieve and manipulate data using ADO.NET
- Display and edit data quickly and easily using new data binding features
- Use Membership features to manage your Web users
- Use new Site Navigation controls to direct users within your site
- Redirect users on unhandled errors
- Use the Trace object for page-level monitoring
- Use Web Events to provide programmatic health monitoring
- Create new user-defined controls
- Create and consume XML Web Services
- Take advantage of ASP.NET's versatile output caching to increase performance
- Add scalability and reliability by setting up an out-of-process session state server
- Create a Web Setup project in Visual Studio to build a deployment package that takes advantage of Windows Installer
- Call an XML Web service from an ASP.NET Web application and incorporate the returned data into a Web application.

Course Outline

Module 1: Introduction to ASP.NET

- A Review of Classic ASP
- ASP.NET Web Applications
- Rendering HTML with Server Controls
- Data Binding in ASP.NET 2.0

Module 2: Working with Controls

- Introduction to Web Controls

- Simple Input Controls
- HyperLink and Button Controls
- List Controls
- Controlling Focus

Module 3: Using Rich Server Controls

- Introduction to Rich Controls
- The Calendar Control
- The AdRotator Control
- The XML Control

Module 4: Accessing Data

- Overview of ADO.NET
- Connecting to Data
- Executing Commands
- Working with Data
- Choosing an ADO.NET Provider

Module 5: Data Binding

- Introducing Data Source Controls
- Reading and Write Data Using the SqlDataSource Control
- Displaying and Editing Middle-Tier Data using the ObjectDataSource Control
- Displaying XML Data Using the XmlDataSource Control

Module 6: Site Navigation

- Providers and Data Sources
- Creating an XML Site Map File
- Site Navigation Controls
- Using the Site Navigation API
- URL Mapping
- Security Trimming

Module 7: Displaying Data with the GridView Control

- Introducing the GridView Control
- Filter Data in the GridView Control
- Allow Users to Select from a DropDownList in the Grid
- Add a Hyperlink to the Grid
- Deleting a Row and Handling Errors

Module 8: Configuration

- Configuration Overview
- Using the Web Site Administration Tool
- Programming Configuration Files
- Encrypting Configuration Sections

Module 9: Validating User Input

- Overview of ASP.NET Validation Controls

- Using the Simple Validators
- Using the Complex Validators
- Summarizing Results with the ValidationSummary Control
- Separating Validation into Validation Groups

Module 10: Themes and Master Pages

- Creating a Consistent Web Site
- ASP.NET 2.0 Themes
- Master Pages

Module 11: Creating New Controls

- Two Kinds of User-Defined Controls
- Creating a User Control
- A More Complex User Control
- Creating a Custom Control
- Investigating the StateDropDownList Control

Module 12: Managing State

- Preserving State in Web Applications
- Page-Level State
- Using Cookies to Preserve State
- ASP.NET Session State
- Storing Objects in Session State
- Configuring Session State
- Setting Up an Out-of-Process State Server
- Storing Session State in SQL Server
- Using Cookieless Session IDs
- Application State

Module 13: Managing Users with ASP.NET's Membership Features

- Introduction to Membership and Roles
- Using Membership Controls
- Writing Code to Interact with Membership and Roles

Module 14: Improving Performance with Output Caching

- The Importance of Caching
- Declarative Page Output Caching
- Caching Page Fragments
- Post-Cache Substitution
- Caching Configuration

Module 15: Debugging ASP.NET Applications

- Using the Visual Studio Debugging Features
- Handling Errors and Redirecting Users
- Debugging Client-Side Script
- Debugging SQL Server Code

Module 16: Tracing

- Using Page-Level Tracing
- Using Application-Level Tracing
- Using Web Events
- Viewing Information With the Web Development Helper

Module 17: Creating and Consuming Web Services

- The Motivation for XML Web Services
- Creating an XML Web Service with Visual Studio
- Designing XML Web Services
- Creating Web Service Consumers
- Discovering Web Services Using UDDI