

## Developing Microsoft ASP.NET Web Applications Using Visual Studio .NET

- **Course Number:** 2310
- **Length:** 5 Day(s)

### Certification Exam

This class will help the student prepare for the following Microsoft Certification exams:

- **Exam 70-305:** Developing and Implementing Web Applications with Microsoft Visual Basic .NET and Microsoft Visual Studio .NET
- **Exam 70-315:** Developing and Implementing Web Applications with Microsoft Visual C# .NET and Microsoft Visual Studio .NET

### Course Overview

This five-day course will teach Microsoft Visual Basic programmers and beginning Web developers the fundamentals of Web application site implementation by using Microsoft ASP.NET and Microsoft Visual Basic .NET. This course focuses on using the Microsoft Visual Studio .NET environment and the Microsoft .NET platform to create an ASP.NET Web application that delivers dynamic content to a Web site.

### Prerequisites

Before attending this course, students must have:

- The ability to create HTML or DHTML, including tables, images, and forms.
- Programming experience using Visual Basic .NET, including declaring variables, using loops, and using conditional statements.

Students can satisfy the prerequisites for this course by completing Course 1912: Introduction to Web Development Technologies.

In addition, it is recommended, but not required, that students have completed:

- Course 2559: Introduction to Visual Basic .NET programming
- Course 2373: Programming with Microsoft Visual Basic .NET

### Audience

This course is intended for beginning Web developers who have knowledge of the Hypertext Markup Language (HTML) or dynamic HTML (DHTML), along with some knowledge of a scripting language, such as Visual Basic Scripting Edition or Microsoft JScript. This course is also appropriate for Visual Basic 6.0 developers wanting to learn ASP.NET.

### Course Outline

Level 1

Net Framework Overview

1.1 Overview of the .NET Framework

1.2 Lab Application Setup

Lab - Skills Measured by Exam 70-305

Using Visual Studio .NET 1h 14m 44s

2.1 Using Microsoft Visual Studio .NET

2.2 Creating an ASP.NET Web App with VB

2.3 ASP.NET Web Application

2.4 Internet Information Services

Lab - Using the Visual Studio.Net IDE

Lab - Internet Information Services (IIS)

Level 2

Using .NET Based Languages

1.1 Runtime Components

1.2 .NET Base Class Library

1.3 Classes and Structures

1.4 Scope and Access Levels

1.5 Garbage Collection

1.6 Choosing a Language

1.7 What are Classes and Components

1.8 Build a Web Application

Lab - Creating a Component

Level 3

ASP.NET Web Forms

1.1 Create a Form

1.2 Using Server Controls

1.3 Demonstration

1.4 HTML Controls

1.5 Adding Controls

1.6 Lab - Creating a Web Form

Lab - Converting HTML Page to a Web Form

Level 4

Adding Code to a .NET Web Form

1.1 Using Events

1.2 Event Procedures

1.3 Create an Event

1.4 Using Page Events

1.5 Post Back Events

1.6 Linking Controls Together

1.7 Linking Controls Examples

1.8 Lab - Adding Functionality

Lab - Handling Events in VB

Tracing in ASP.NET Web Apps

2.1 Tracing in to a Component

2.2 Remote Debugging

2.3 Lab - Tracing in Web Applications

Lab - Remote Debugging

Level 5

Validating User Input

1.1 What is Input Validation

1.2 Spoofing and Malicious Code

1.3 Client and Server-Side Validation

1.4 Validation Controls

1.5 Using Validation Controls

1.6 Adding Validation Controls to a Web Form

1.7 Combining Validation Controls

1.8 Input Validation Controls

1.9 Regular Expression Validator Control

1.10 Demonstration

1.11 Custom Validation Control

1.12 Page Validation

1.13 Validation Summary Control

1.14 Adding Controls

1.15 Review

1.16 Lab - Validating User Input

1.17 Adding Textbox Controls

Creating User Controls

2.1 Adding User Controls

2.2 Adding a User Control

2.3 Demonstration

2.4 How to use a User Control

2.5 How to Insert a User Control

Level 6

Relational Data

- 1.1 ADO.NET
- 1.2 Using Namespaces
- 1.3 ADO.NET Object Model
- 1.4 Review 1
- 1.5 Accessing Data with ADO.NET
- 1.6 Creating a Connection to a Database
- 1.7 Data Adaptor Object Model
- 1.8 Demonstration 1
- 1.9 Generating a DataSet
- 1.10 Demonstration
- 1.11 Displaying a DataSet
- 1.12 Demonstration 3
- 1.13 Data Grid Control
- 1.14 Review 2
- 1.15 Lab - Accessing Relational Data 1
- 1.16 Summary
- Lab - Accessing Relational Data 2
- Level 7
- Accessing Data with ADO.NET
- 1.1 introduction to Using ADO.NET
- 1.2 Using DataSets vs. DataReader
- 1.3 SQL Server Security
- 1.4 Creating the Connection
- 1.5 Demonstration
- 1.6 Accessing Date with DataSets
- 1.7 Creating a DataAdapter
- 1.8 Creating a DataSet
- 1.9 Programmatically Using a DataSet
- 1.10 Using a DataView Object
- 1.11 Binding a DataSet
- 1.12 Demonstration 2
- 1.13 Handling Errors
- 1.14 Storing Relationships
- 1.15 Creating Relationships
- 1.16 Navigating Between Tables
- 1.17 Demonstration 3
- 1.18 Accessing Data with DataReaders
- 1.19 What is a DataReader?
- 1.20 Creating a DataReader
- 1.21 Reading Data from a DataReader
- 1.22 Binding a DataReader
- 1.23 Demonstration4
- 1.24 Lab - Accessing data with ADO.NET
- Lab - Connecting to a Databace
- Level 8
- Overview of .Net Framework
- 1.1 What is a Stored Procedure
- 1.2 Calling Stored Procedures
- 1.3 Demonstration
- 1.4 Display Data
- 1.5 Using Parameters
- 1.6 Passing Input Parameters
- 1.7 Output Parameters
- 1.8 How to Pass Parameters
- 1.9 Review
- 1.10 Lab - Calling Stored Procedures
- Lab - Displaying Data from a Procedure
- Reading and Writing XML Data
- 2.1 What is XML?
- 2.2 Why Use XML with Data Sets
- 2.3 XML Based Methods of DataSet Objects
- 2.4 Demonstration
- 2.5 Nested XML Data
- 2.6 Demonstration2
- 2.7 Working with XML Data
- 2.8 Synchronizing a DataSet
- 2.9 Working with an XML Data Document
- 2.10 Demonstration3
- 2.11 Using the XML web Server Control

2.12 Loading and Saving XML Data

2.13 Demonstration 4

2.14 Review

2.15 Lab - Reading XML Data

Lab - Using the XML Web Server Control

Level 9

Creating Web Services

1.1 Overview

1.2 Why Use XML web Services

1.3 Finding and XML web Service

1.4 Calling an XML web Service Using HTTP

1.5 Demonstration 1

1.6 Using Proxy to Call an XML Web Service

1.7 Demonstration 3

1.8 XML Web Service Error Handling

1.9 Demonstration 3

1.10 Creating an XML Web Service

1.11 How to Create and XML Web Service

1.12 XML Web Service Code

1.13 Demonstration

1.14 Lab - Consuming Web Services

1.15 Lab - Exploring an XML Web Service

Managing State

2.1 State Management

2.2 What is State Management

2.3 Types of State Management

2.4 Server Side State Management

2.5 Client Side State Management

2.6 Global. ASAX File

2.7 Application and Session Variables

2.8 Initializing Application Variables

2.9 Demonstration 1

1.10 Variable Duration

2.11 Scalable Storage of Variables

2.12 Saving Variables in a Database

2.13 Cookies and Cookieless Sessions

2.14 Demonstration2

2.15 Retrieving Information from a Cookie

2.16 Using Cookieless Sessions

2.17 Setting up Cookieless Sessions

2.18 Review

2.19 LAB - Storing Application and Session

Lab - Using Cookies to Store Date

Level 10

Configure, Optimize, Deploy

1.1 Securing ASP.NET

1.2 Web Application Security Overview

1.3 Authentication vs. Authorization

1.4 ASP.NET Authentication Methods

1.5 Comparing ASP.NET Authentication Meth

1.6 IIS Authentication Mechanisms

1.7 Demonstration 1

1.8 What is Secure Sockets Layer

1.9 Windows Based Authentication

1.10 How to Enable Windows Authentication

1.11 Enabling Impersonation

1.12 Reading User Information

1.13 Demonstration 2

1.14 Forms Based Authentication

1.15 Overview

1.16 Enable Forms Based Authentication

1.17 Creating a Logon Page

1.18 Demonstration 3

1.19 Passport Authentication Overview

1.20 How Does Passport Work

1.21 Other Passport Resources

1.22 Review

1.23 Lab - Securing a ASP.NET Web Application

Lab - Using Dynamic Properties

## Securing a Web Application

### 2.1 Cache Object Overview

### 2.2 Cache Object Advantages

### 2.3 Using a Cache Object

### 2.4 Removing Cache Object Items

### 2.5 Demonstration 1

### 2.6 ASP.NET Output Caching Overview

### 2.7 Using Page Output Caching

### 2.8 Demonstration 2

### 2.9 Fragment Caching

### 2.10 Configuring

### 2.11 Configuring Methods

### 2.12 Demonstration 3

### 2.13 Data Storage and Recall

### 2.14 Using Dynamic Properties

### 2.15 Demonstration 4

### 2.16 Deploying an ASP.NET Overview

### 2.17 Web Application Deployment

### 2.18 Global Assembly Cache

### 2.19 Updating Web Applications

### 2.20 Lab - ASP.NET Web Application

### Lab - IIS Authentication Mechanisms