



# ASP.NET Web Programming with C# & Bootstrap

Course ISI-1473

5 Days

Instructor-led, Hands-on

## Introduction

If you have a core set of C# programming skills, you're ready to learn to develop server-side web applications with ASP.NET in this five day, instructor-led course.

The course starts coverage of ASP.NET Web Forms, Visual Studio tools and the role of HTML5/CSS3. Learn how to use the server controls, validate user entries, manage state, use master pages and themes, provide site navigation and use friendly URLs. Develop database-driven websites at a professional level, including how to use SQL data sources, object data sources and ASP.NET data controls like the GridView, DetailsView, FormView and ListView controls.

Learn how to develop secure web pages, authorize and authenticate users, send email, control the use of the Back button and deploy finished applications. Use ASP.NET Ajax, how to develop WCF and Web API services and how ASP.NET MVC programming differs from Web Forms programming

## At Course Completion

After completing this course, students will understand:

- Highlights the latest features of ASP.NET 4.6 and Visual Studio
- Details how to work with ASP.NET 4.6 controls
- Explains what the ASP.NET state engine is and why it is important
- Shares advice for creating consistent-looking websites
- Includes information on how to add features with pre-built server controls
- Reveals practical tips for using user controls
- Clarifies ways to use Web Services and page methods in Ajax websites
- Explores measures to take for optimal security

## Prerequisites

Before attending this course, students should have the following experience:

- Knowledge of HTML or DHTML, including:
  - Tables, Images, Forms
- Programming experience using Visual Basic .NET or Visual C# .NET, including:
  - Declaring variables
  - Using loops
  - Using conditional statements

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## **Course Materials**

The student kit includes a comprehensive workbook and other necessary materials for this class.

## **Course Outline**

### **Module 1: An Introduction to ASP.NET Programming**

- An introduction to web applications
- An introduction to ASP.NET development
- How an ASP.NET application works

### **Module 2: How to Develop a One-Page Web Application**

- How to work with ASP.NET web application projects
- How to use Visual Studio to build a web form
- How to add validation controls to a form
- How to add C# code to a form
- How to test a web application

### **Module 3: How to use HTML5, CSS3 and Bootstrap with ASP.NET**

- The Future Value application with CSS formatting
- The HTML and CSS skills that you need
- Visual Studio features for working with HTML and CSS
- How to use Bootstrap for responsive web design
- The Bootstrap version of the Future Value application

### **Module 4: How to Develop a Multi-Page Web Application**

- Introduction to the Shopping Cart application
- How to work with multi-page web applications
- How to create and use data sources
- How to use session state
- The business classes of the Shopping Cart application
- The web forms of the Shopping Cart application

### **Module 5: How to Test and Debug ASP.NET Applications**

- How to test an ASP.NET web application
- How to use the debugger
- How to use the trace feature

### **Module 6: How to Use the Standard Server Controls**

- An introduction to the standard server controls

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- How to use the common server controls
- How to use the button controls
- How to use the list controls
- A CheckOut page that uses server controls
- An introduction to the other standard server controls

## **Module 7: How to Use the Validation Controls**

- Introduction to the validation controls
- How to use the validators
- Validation techniques
- A CheckOut page that uses validation controls

## **Module 8: How to Work with State, Cookies and URL Encoding**

- How to use view state
- How to use session state
- How to use application state and caching
- How to use cookies and URL encoding

## **Module 9: How to Work with Master Pages**

- How to create master pages
- How to create and develop content pages
- How to customize content pages
- The Shopping Cart application

## **Module 10: How to Work with Bootstrap in ASP.NET**

- How to use the Bootstrap CSS classes
- How to use the Bootstrap components
- How to work with Bootstrap themes
- How to control the rendered HTML

## **Module 11: How to Work with Friendly URLs and Routing**

- An introduction to friendly URLs
- How to use the Friendly Urls feature
- How to use ASP.NET routing
- How to combine ASP.NET routing with Friendly Urls

## **Module 12: An Introduction to Database Programming**

- An introduction to relational databases
- How to use SQL to work with the data in a relational database
- How to work with other database objects
- An introduction to ADO.NET

## **Module 13: How to Use SQL Data Sources**

- How to create a SQL data source
- How to use custom statements and stored procedures
- How to use the DataList control
- How to use data binding
- A Product List application
- How to use the advanced features of a SQL data source

## **Module 14: How to use the GridView control**

- How to customize the GridView control
- A list application that uses a GridView control
- How to update GridView data
- A maintenance application that uses a GridView control
- How to work with template fields

## **Module 15: How to Use the DetailsView and Form View Controls**

- How to use the DetailsView control
- How to update the data in a DetailsView control
- The product Maintenance application
- How to use the FormView control
- A Shopping Cart application that uses a FormView control

## **Module 16: How to Use the ListView and DataPager Controls**

- How to use the ListView control
- A list application that uses a ListView control
- How to update ListView data

## **Module 17: How to Use Object Data Sources with ADO.NET**

- An introduction to object data sources
- A Product List application
- How to create a data access class
- A Category Maintenance application
- How to use paging and sorting with object data sources

## **Module 18: How to Use Model Binding and the Entity Framework**

- How to create an Entity Data Model
- How to use LINQ to entities
- How to use model binding to display data
- A Product List application

- How to use model binding to update, insert and delete data
- A Product Maintenance application
- How to use data annotations to validate data

### **Module 19: How to Secure a Web Application**

- An introduction to TLS/SSL
- How to use a secure connection
- A Shopping Cart application that uses TLS/SSL

### **Module 20: How to Authenticate and Authorize Users**

- An introduction to authentication
- How to create a web application that authenticates users
- How to authorize users
- A User Maintenance application
- How to customize users

### **Module 21: How to Use Email, Custom Error Pages and Back-Button Control**

- How to send email
- How to use custom error handling
- How to handle the back-button problem

### **Module 22: How to Configure and Deploy ASP.NET Web Applications**

- How to work with Visual Studio's one-click publish feature
- How to use the File System method
- How to use the Web Deploy method

### **Module 23: How to use ASP.NET Ajax**

- An introduction to Ajax
- An introduction to ASP.NET Ajax
- How to use the ASP.NET Ajax server controls
- An application that uses ASP.NET Ajax

### **Module 24: How to Create and Use WCF and Web API Services**

- An introduction to web services
- How to create a WCF service
- How to create a web application that consumes a WCF service
- How to create a Web API service
- How to create a web application that consumes a Web API service