



ASP.NET Core Development

Course ISI-1560

5 Days

Instructor-led, Hands-on

Introduction

If you understand HTML/CSS and C#, you're ready to learn how to develop ASP.NET Core MVC apps.

This class gets you started fast whether you are new to server-side web development or have years of experience.

You will learn all the skills you need to develop bulletproof, database-driven web apps. That includes using endpoint routing, Razor views, model binding, data validation, dependency injection, Bootstrap for responsive design, EF Core to work with databases, xUnit and Moq for unit testing, and Identity for authentication.

When you're done, this courseware works as the best on-the-job reference that money can buy.

At Course Completion

After completing this course, students will be able to:

- Get off to a fast start with ASP.NET Core
- Master the essential skills
- Add more skills as you need them

Prerequisites

Before attending this course, students should be comfortable with the following:

- Previous experience developing web-based applications with C#
- Some familiarity with HTML, CSS, and JavaScript

Course Materials

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

Course Outline

Module 1: An introduction to web programming and ASP.NET Core MVC

- An introduction to web apps
- An introduction to ASP.NET Core MVC
- Tools for working with ASP.NET Core MVC apps

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- How an ASP.NET Core MVC app works

Module 2: How to develop a one-page MVC web app

- How to create a Core MVC web app
- How to run a web app and fix errors
- How to work with a model
- How to organize the files for a view
- How to validate user input

Module 3: How to make a web app responsive with Bootstrap

- An introduction to responsive web design
- How to get started with Bootstrap
- More skills for Bootstrap CSS classes
- More skills for Bootstrap components
- How to work with navigation bars

Module 4: How to develop a data-driven MVC web app

- An introduction to the Movie List app
- How to use EF Core
- How to work with data
- The Movie List app
- How to work with related data
- How to make user-friendly URLs

Module 5: How to manually test and debug an ASP.NET Core web app

- How to test an ASP.NET Core web app
- How to use the debugger

Module 6: How to work with controllers and routing

- How to use the default route
- How to create custom routes
- How to use attribute routing
- Best practices for creating URLs
- How to work with areas

Module 7: How to work with Razor views

- How to use Razor syntax
- Essential skills for Razor views
- More skills for Razor views
- How to work with a model
- How to work with Razor layouts



- The Guitar Shop website

Module 8: How to transfer data from controllers

- How to use ActionResult objects
- How to use the ViewData and ViewBag properties
- The NFL Teams 1.0 app
- How to work with view models
- How to redirect a request
- How to use the TempData property
- The NFL Teams 2.0 app

Module 9: How to work with session state and cookies

- How ASP.NET MVC handles state
- How to work with session state
- How to encapsulate session values
- The NFL Teams 3.0 app
- The NFL Teams 4.0 app

Module 10: How to work with model binding

- An introduction to MVC model binding
- More skills for binding data
- The ToDo List app

Module 11: How to validate data

- How data validation works in MVC
- How to control the user experience
- How to customize server-side validation
- How to customize client-side validation
- The Registration app

Module 12: How to use EF Core

- How to create a database from code
- How to work with relationships
- The Bookstore database classes
- How to create code from a database
- How to work with data in a database
- How to handle concurrency conflicts
- How to encapsulate your EF code

Module 13: The Bookstore website

- The user interface and folder structure
- Some general-purpose code

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- The paging and sorting of the Author Catalog
- The paging and sorting of the Book Catalog
- The Cart page
- The Admin area

Module 14: How to use dependency injection and unit testing

- How to use dependency injection (DI)
- How to get started with unit testing
- How to test methods that have dependencies
- How to create fake objects with Moq
- The Bookstore.Tests project

Module 15: How to work with tag helpers, partial views, and view components

- An introduction to tag helpers
- How to create custom tag helpers
- More skills for custom tag helpers
- How to work with partial views
- How to work with view components
- The Bookstore app

Module 16: How to authenticate and authorize users

- An introduction to authentication
- How to get started with Identity
- How to register a user
- How to log in a user
- How to work with roles
- More skills for working with Identity

Module 17: How to deploy ASP.NET Core MVC apps

- How to work with Visual Studio's publish feature
- How to publish to the file system
- How to publish a simple app to Azure
- How to publish a data-driven app to Azure
- How to work with an Azure app

Module 18: How to use Visual Studio Code

- How to work with existing projects
- How to work with existing projects
- How to debug a project