



Enterprise ASP.NET Core 3 Development

Course ISI-1525B 5 Days Instructor-led, Hands on

Course Information

If you understand HTML/CSS and C#, you're ready to learn how to develop ASP.NET Core MVC apps. ASP.NET Core 3 is the latest release of Microsoft's cross-platform version of its ASP.NET Web development framework. Version 3 includes several new features and improvements. introduces attendees to ASP.NET Core development and teaches the skills necessary to design and build well-architected web and service-oriented applications.

This 5-day course, instructor-led course gets you off to a fast start whether or not you have prior experience with server-side development. It teaches you all the skills you need to develop bulletproof, database-drive web apps. That includes using endpoint routing, Razor views, model binding, data validation, dependency injection, Bootstrap for responsive design, Entity Framework Core for database handling, xUnit and Moq for unit testing and identity for authentication.

At Course Completion

After completing this course, students will be able to:

- Develop real-world web apps using C# code for the model and controller classes
- Use HTML, CSS, and Razor code for the view files (for the user interface).
- Use Bootstrap classes for responsive design so that your apps adapt well to all screen sizes.
- Be able use the debugging tools in Visual Studio and your browser to test your apps and make sure they'll work right for all users.
- Build out that set of skills to create more complex controllers, work with Razor views, handle cookies and sessions, do model binding, validate data, and handle database data with EF (Entity Framework) Core
- You'll also see how all these skills come together in a single application, with coverage of the gotchas that can occur and how to solve them.
- Pick up additional skills as you need them to: create custom tag helpers and view components; authenticate and authorize users; use dependency injection to automate testing; and use Visual Studio Code
- All along the way, you'll get complete web apps that show you how each feature works in context

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Prerequisites

Before attending this course, students must have:

- Experience with the C# programming language and object-oriented programming concepts.
- Knowledge of HTML, CSS, and JavaScript concepts.

Course Outline

Module 1: Introduction to web programming with 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
- How an ASP.NET Core MVC app works

Module 2: How to develop a single-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 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

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- 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

Module 8: How to transfer data from controllers

- How to use ActionResult objects
- How to use the ViewData and ViewBag properties
- How to work with view models
- How to redirect a request
- How to use the TempData property.

Module 9: How to work with session state and cookies

- How ASP.NET MVC handles state
- How to work with session state
- How to work with cookies

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

Module 12: How to use EF Core

- How to create a database from code
- How to work with relationships

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- How 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
- The page and sorting of the Author Catalog
- The paging, sorting and filtering of the Book Catalog
- The Cart page
- The book search of the Admin pages

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

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 use Visual Studio Code

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