



ASP.NET Core 2 Development

Course ISI-1500 - Five days - Instructor-led

Introduction

ASP.NET Core is a completely new web stack developed from the ground up. This 5-day course introduces attendees to this new platform and teaches attendees the skills necessary to design and build well-architected web and service-oriented applications that follow the MVC design pattern.

This course includes a total of 15 hands-on lab exercises that lead to working e-commerce style web application.

At Course Completion

After completing this course, students will be able to:

- Introduction
- Hello World
- ASP.NET Core Application Architecture
- Application Configuration
- Request Routing
- Models
- Controllers
- Views
- HTML Forms
- Application State
- Data Validation
- Authentication
- Error Handling
- Logging
- Testing Web APIs
- Deployment

Prerequisites

Before attending this course, students must have:

- Prior .NET experience and basic skills with HTML and JavaScript is assumed.
- Visual Studio 2017 (any edition) with the ASP.NET Core tools installed
- LocalDB or another version of SQL Server
- Postman or a similar application for testing Web APIs

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



Student Materials

Each student receives a printed copy of all the material presented by the instructor.

Each student receives a lab manual consisting of a series of hands-on lab exercises that take students through the building of a data-driven 3-tier ASP.NET Core application.

Course Outline

Module 1: Introduction

- Overview
- .NET Core
- Tooling

Module 2: Hello World

- .NET Core (CLI)
- CLI Commands
- ASP.NET Core (CLI)
- AspNetCore NuGet Metapackage
- WebHost and Kestrel
- ASP.NET Core (Visual Studio)

Module 3: Application Architecture

- Middleware
- Services

Module 4: Application Configuration

- Startup Class
- Configure Method
- Configure Services Method
- MVC Components
- Configuration Sources
- Configuration API
- Options Pattern

Module 5: Request Routing

- RESTful API
- Routing Middleware
- Route Templates
- Route Constraints
- MVC Middleware
- Attribute-Based Routing

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



Module 6: Models

- Introduction
- Persistence Ignorance
- Object-Relational Mapping
- Entity Framework (EF) Core

Module 7: Controllers

- Introduction
- Requirements and Conventions
- Dependencies
- Action Results

Module 8: Views (Part 1)

- Introduction
- Conventions
- Razor Syntax
- Layouts
- ViewData and ViewBag
- Strongly-Typed Views
- Partial Views

Module 9: Views (Part 2)

- View Models
- HTML and URL Helpers
- Tag Helpers
- View Components
- Client-Side Dependencies

Module 10: HTML Forms

- Introduction
- Form Tag Helper
- Form Submissions
- Model Binding

Module 11: Application State

- Introduction
- HttpContext Items
- Sessions State
- TempData

Module 12: Data Validation

- Introduction
- Data Annotations
- Input Tag Helpers
- Validation Tag Helpers

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



Module 13: Authentication

- Introduction
- ASP.NET Core Identity
- Cookie Middleware
- Authorization
- Claims-Based Authorization

Module 14: Error Handling

- Introduction
- HTTP Error Status Codes
- Status Code Pages
- Developer Exception Page
- Exception Filters

Module 15: Logging

- Introduction
- Configuration
- ILogger

Module 16: Testing

- Introduction
- Unit Testing
- xUnit
- Testing Controllers
- Integration Testing

Module 17: Web APIs

- Introduction
- Retrieval Operations
- Create Operations
- Update Operations
- Delete Operations
- Bad Requests
- Cross-Origin Resources Sharing (CORS)
- Swagger