.NET Core: Developing Cross-Platform Web Apps with ASP.NET Core

WorkshopPLUS

**Duration:** 4 days  |  **Focus Area:** Availability and Business Continuity  |  **Level:** 300

**.NET Core: Developing Cross-Platform Web Apps with ASP.NET Core WorkshopPLUS** establishes fundamentals of ASP.NET Core before diving into full-stack development techniques. Through a series of instructor-led lectures, demos, and hands-on labs, you will build & deploy a fully functional cross-platform ASP.NET Core application to Azure and on-premise.

With ASP.NET Core, you can:
- Build web apps and services, IoT apps, and mobile backends.
- Use your favorite development tools on Windows, macOS, and Linux.
- Deploy to the cloud or on-premises.
- Run on .NET Core or .NET Framework.

**OUTCOMES**

**Skills**
Gain a comprehensive understanding of the features and fundamentals of .NET Core, ASP.NET Core, and .NET Standard

**Best Practices**
Learn reliable methods of building web UI and web APIs

**Way Forward**
Take what you’ve learned in the classroom and modernize your business apps and make it cross-platform and cloud compatible

**PREREQUISITES**

**Recommended Qualifications**
- Previous experience with ASP.NET or open-source technologies such as Node.js
- Developers looking to build ASP.NET Core web apps or REST services

**Hardware Requirements**
- 8 GB RAM
- Windows 7 SP1 or later
- Microsoft Office
- Internet access with at least 5 Mbps bandwidth per student

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AGENDA

Duration: 4 days

START

Day 1
Overview

Day 2
Models
Views

Day 3
Controllers
Web API
Client-side
Development

Day 4
Validation
Routing
Security

End

SYLLABUS

Module 1: Overview
Fundamentals of ASP.NET Core, .NET Core, and .NET Standard, .NET Framework vs. .NET Core, project layout and templates, Razor Pages, CLI, Middleware, and hosting options & configuration

Module 2: Models
Model development, Entity Framework Core, code-based modeling, model design, model binding, Fluent API, and scaffolding

Module 3: Controllers
Controller development, model binding and filters, advanced controller design and extensibility, dependency injection (DI), and controller best practices

Module 4: Views
View fundamentals, HTML 5 and Bootstrap, scaffolding, and Razor view engine

Module 5: Web API
REST, Web API fundamentals, Web API routing, HTTP messages and content negotiations, hosting and consuming Web API, and Web API usage patterns

Module 6: Client-Side Development
MVC and JavaScript, Bower and Grunt, jQuery and Asynchronous JavaScript and XML (AJAX), and Single Page Applications (SPA)

Module 7: Validation
Validation fundamentals, model and UI validation

Module 8: Routing
Routing and URL fundamentals, MVC routing techniques, conventional and attribute routing, and route debugging

Module 9: Security
Fundamental security principles, authentication and authorization scenarios & protocols, OpenID Connect and OAuth, ASP.NET Identity, and ASP.NET Core security threats and defenses

Optional Modules:
The amount of time spent on these module will be determined by the audience interest level and use case.
- Cloud Development
- Debugging and diagnostics
- Application Insights
- Hosted Web Apps in Win 10
- Migration to ASP.NET Core

NEXT STEPS: If you are interested in this title for your organization, contact your Microsoft Account Representative.