

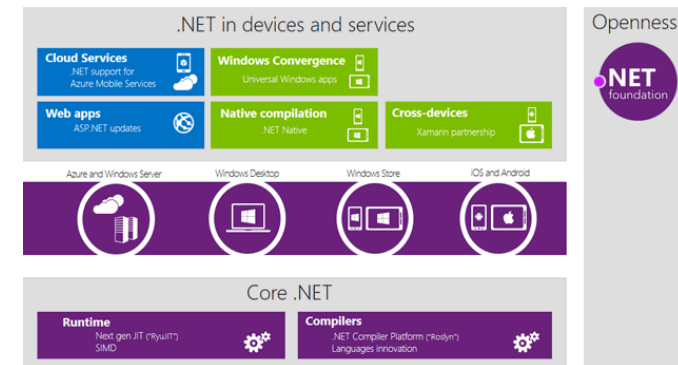
## ASP.NET

### Course Guide

Microsoft Certified Solutions Developer – Web Applications is based on .NET technologies covers ASP.Net and C#. Program provides a comprehensive and consistent programming base for building applications that have visually stunning user experiences.

Courses can add towards no of MCSD Certifications:

MCP – Dev. ASP.NET MVC Web Apps – Exam 70-486  
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## ASP.NET Course Contents

ASP.NET training curriculum follows the Microsoft standards and is designed to meet the requirements of next generation programming needs.

## C Sharp (C#)

### Getting Started

- Installing Visual Studio
- Creating a console application

### Language Fundamentals

- Everything is an object
- Understanding C# syntax
- Identifier naming conventions
- Using the documentation

### Declaring Variables

- Using built-in data types
- Declaring variables
- Working with characters, Strings
- Building strings with StringBuilder
- Parsing strings as numbers
- Using mathematical operators
- Working with Boolean values and expressions
- Using constants and enumerations
- Working with dates and times
- Using simple arrays

### Managing Application Flow

- Getting input in a console application
- Evaluating conditions with if and else
- Evaluating conditions with switch statements
- Looping with for statements
- Looping with while and do statements
- Looping with foreach and in
- Creating reusable code with methods
- Managing variable visibility and scope
- Managing flow with break and continue
- Challenge: Building a simple calculator application
- Solution: Building a simple calculator application

### Exception Handling and Debugging

- Understanding runtime exceptions
- Debugging exceptions in your code
- Handling exceptions with try/catch
- Using multiple catch statements
- Cleaning up with finally

### Creating Custom Classes

- Defining a class with static methods
- Representing data with plain-old class objects
- Declaring private fields and public properties
- Declaring properties with shorthand get and set methods
- Overriding the ToString() method
- Adding multiple constructor methods
- Organizing classes with namespaces

### Working with Inheritance and Polymorphism

- Extending a class to create a new class
- Overriding and calling base class methods
- Creating methods that accept sub-classed objects

## Programming Web Applications with ASP.NET

### Overview of .NET & Web Technologies

- Overview of Microsoft Web Technologies
- Overview of ASP.NET
- Introduction to ASP.NET MVC

### Designing ASP.NET MVC Web Applications

- Planning in the Project Design Phase
- Designing Models, Controllers, and Views

### Developing ASP.NET MVC Models

- Creating MVC Models
- Working with Data

### Developing ASP.NET MVC Controllers

- Writing Controllers and Actions
- Writing Action Filters
- Add Controllers to an MVC Application to manage user interaction, update models, and select and return Views.

### Developing ASP.NET MVC Views

- Creating Views with Razor Syntax
- Using HTML Helpers
- Reusing Code in Views

### Testing and Debugging ASP.NET MVC Web Applications

- Unit Testing MVC Components
- Implementing an Exception Handling Strategy

### Structuring ASP.NET MVC Web Applications

- Analyzing Information Architecture
- Configuring Routes
- Creating a Navigation Structure

### Applying Styles to ASP.NET MVC Web Applications

- Using Template Views
- Applying CSS to an MVC Application
- Creating an Adaptive User Interface

## Building Responsive Pages in ASP.NET MVC Web Applications

- Using AJAX and Partial Page Updates
  - Implementing a Caching Strategy
- ### Using JavaScript and jQuery for Responsive MVC Web Applications

- Rendering and Executing JavaScript Code
- Using jQuery and jQueryUI

### Controlling Access to ASP.NET MVC Web Applications

- Implementing Authentication and Authorization
- ### Building a Resilient ASP.NET MVC Web Application

- Developing Secure Sites
- State Management

### Implementing Web APIs in ASP.NET MVC Web Applications

- Developing a Web API
- Calling a Web API from Mobile and Web Applications

### Deploying ASP.NET MVC Web Applications

- Deploying a Web Application
- Deploying an MVC Application

### Practical Approach

- A real example will be given throughout the lectures, starting from design, analysis, implementation and maintenance.

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