

#10264A: DEVELOPING WEB APPLICATIONS WITH MICROSOFT VISUAL STUDIO 2010

Available Dates: **Call for Dates**

Class Length: **5 day**

Cost: **\$2,795**

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Class Outline:

Description:

In this course, students will learn to develop advanced ASP.NET MVC and Web Forms applications using .NET Framework 4 tools and technologies. The focus will be on coding activities that enhance the performance and scalability of the Web site application. ASP.NET MVC will be introduced and compared with Web Forms so that students know when each should/could be used. This will also prepare the student for exam 70-515.

Course Outline:

Module 1: Overview of Web Application Design

This module describes the underlying architecture and design of a Web application

Lessons

- Overview of IIS 7.0
- Overview of ASP.NET 4.0
- Introduction to the MVC Framework
- Overview of the Request Life Cycle

Module 2: Designing a Web Application

This module describes the best practices and trade-offs that you need to make when designing a Web application.

Lessons

- Web Applications: Case Studies
- Web Application Design Essentials
- Guidelines for Determining When to Use Web Forms and MVC
- Visual Studio 2010 Tools and Technologies for Web Application Design

Module 3: Developing MVC Models

This module describes the MVC development model (Models, Controllers, and Views) and how to create the Models that are used to access and modify the data in a data source.

Lessons

- Exploring Ways to Create MVC Models
- Creating a Data Repository

Module 4: Developing MVC Controllers

This module describes how to create the Controllers that are used to respond to communications from the user and how to implement the application flow and logic.

Lessons

- Implementing MVC Controllers
- Creating Action Methods

Module 5: Developing MVC Views

This module describes how to create the Views that are used to expose the application UI. The module also covers how to manage pre-action and post-action behavior of Controller action methods using the included action filters are provided as part of MVC

Lessons

- Implementing MVC Views
- Implementing Strongly-Typed MVC Views
- Implementing Partial MVC Views

Module 6: Designing for Discoverability

This module describes how to implement the navigational design and also how discoverability will be achieved through content keywords and page URLs.

Lessons

- Overview of Search Engine Optimization
- Creating the Robots and Sitemap Files
- Using ASP.NET Routing

Module 7: Writing Server-Side Code for Web Forms

This module describes the advanced features of server-side coding and technologies. The module describes how to allow the website to move into a global and web farm environment through localization, shared sessions, and custom user controls. The module will also cover how to use the custom validator and regular expressions.

Lessons

- Overview of the Structure of a Web Application
- Controlling ViewState
- Localizing a Web Application
- Persisting Data on a Web Forms Page
- Validating User Input

Module 8: Optimizing Data Management for Web Forms

This module describes how to optimize and display data management tasks for a Web Forms-based application using Dynamic Data, Data Binding, LinqToEntities, server side controls, and server-side code.

Lessons

- Managing Data by Using LINQ to Entities
- Using Data Source Controls
- Using ASP.NET Dynamic Data

Module 9: Ensuring Quality by Debugging, Unit Testing, and Refactoring

This module describes how to perform check-in testing for their Web Forms and MVC applications as well as how to use the built-in debugging capabilities of VS2010.

Lessons

- Debugging and Refactoring Code
- Unit Testing Code
- Processing Unhandled Exceptions
- Test Driven Development

Module 10: Securing a Web Application

This module describes how to mitigate common security threats and to implement the essentials (must haves) of Web security in both MVC and Web Forms applications.

Lessons

- Configuring Authentication
- Configuring ASP.NET Membership
- Managing Authorization by Using ASP.NET Roles

Module 11: Applying Master Pages and CSS

This module describes how to achieve a consistent UI in a reusable manner.

Lessons

- Applying Master Pages
- Applying CSS, Skins, and Themes

Module 12: Developing Client Side Scripts and Services

This module described how to develop client-side scripts and services for a responsive, rich, and interactive application UI.

Lessons

- Developing Client-Side Scripts
- Implementing AJAX
- Creating Services

Module 13: Implementing Advanced AJAX in a Web Application

This module describes the programmatic side of AJAX enabled controls (as well as extending server controls to include AJAX functionality) on a Web Forms page as well as implementing AJAX on a MVC page

Lessons

- Implementing Ajax in ASP.NET MVC Pages Using Microsoft Ajax
- Implementing Ajax in ASP.NET MVC Pages Using jQuery
- Working with jQuery and Ajax Events

Module 14: Deploying a Web Application

This module describes how to plan, configure, and perform deployment tasks associated with a production Web site. The module also describes the Web site lifecycle as it pertains to deployment.

Lessons

- Overview of Web Application Deployments
- Overview of Web Site Deployments
- Deploying AdventureWorks

Module 15: Developing a Web Application by Using Silverlight

This module introduces students to Silverlight by having them integrate a Silverlight module into an existing ASP.NET application. Students will learn how to add a Silverlight project to an existing solution, leverage the existing Web application by calling a WCF service, and display the information in Silverlight.

Lessons

- Introduction to Rich Internet Applications
- Overview of Silverlight
- Creating a Silverlight Application