Overview Concepts of SDLC and .NET Framework 4.0

- Modern software development model
- Typical phases of a software development lifecycle
- Concepts of event-driven programming
- Concepts of object-oriented programming
- Creating use-case diagrams
- Designing and building a user interface
- Developing a structured application
- Common Language Runtime
- .NET Framework class library
- Common Type System
- Component interoperation
- Cross-Language Interoperability
- Assemblies in the Common Language Runtime
- Application Domains
- Runtime hosts supported by the .NET Framework

Module 1: Overview of Web Application Design

- 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

- 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 Models, Controllers and Views

- Exploring Ways to Create MVC Models
- Creating a Data Repository
- Implementing MVC Controllers
- Creating Action Methods
- Implementing MVC Views
- Implementing Strongly-Typed MVC Views
- Implementing Partial MVC Views

Module 4: Designing for Discoverability

- Overview of Search Engine Optimization
- Creating the Robots and Sitemap Files
- Using ASP.NET Routing
Module 5: Writing Server-Side Code for Web Forms
- 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 6: Optimizing Data Management for Web Forms
- Managing Data by Using LINQ to Entities
- Using Data Source Controls
- Using ASP.NET Dynamic Data

Module 7: Ensuring Quality by Debugging, Unit Testing, and Refactoring
- Debugging and Refactoring Code
- Unit Testing Code
- Processing Unhandled Exceptions
- Test Driven Development

Module 8: Securing a Web Application
- Configuring Authentication
- Configuring ASP.NET Membership
- Managing Authorization by Using ASP.NET Roles

Module 9: Applying Master Pages and CSS
- Applying Master Pages
- Applying CSS, Skins, and Themes

Module 10: Developing Client Side Scripts and Services
- Developing Client-Side Scripts
- Implementing AJAX
- Creating Services

Module 11: Implementing Advanced AJAX in a Web Application
- 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 12: Deploying a Web Application
- Overview of Web Application Deployments
- Overview of Web Site Deployments

Module 13: Developing a Web Application by Using Silverlight
- Introduction to Rich Internet Applications
- Overview of Silverlight
- Creating a Silverlight Application