**Module 65: ASP.NET 4.5 Application Model**

 What is ASP.NET

 Role of IIS in Web Application

 Request/Response Model

 How Web Request is Processed

 Application Life Cycle

 Compilation Model in ASP.NET

**Module 66: ASP.NET Web Forms**

 ASP.NET Programming Model

 Web Forms Code Model

 The code behind Web Forms

 Separation of content & Business logic

 Web Forms Page Life Cycle

**Module 67: ASP.NET Web Form Controls**

 HTML Controls

 HTML Server Controls

 ASP Web Controls

 Writing Inline Code

 Writing Code Separately in Code Behind File

**Module 68: ASP.NET Web Form Event Model**

 Understanding Page Level Events

 Control Level events

 Application-Level Events

 Session Level Events

 Error Events

**Module 69: Validation in ASP.NET**

 Validation Scenarios

 Understanding the Need for Validation

 Client-side Validation and Server-side Validation

 Using Different Validation Controls

 Required Field Validator

 Compare Validator

 Range Validator

 Custom Validator

 Regular Expression Validator

**Module 70: The ASP.NET Post Back Model**

 Understand PostBack model of ASP.NET

 Write code that interacts with the PostBack model of ASP.NET

**Module 71: Debugging Tracing and Exception Handling ASP.NET Application**

 Debugging Tools in Visual studio

 Using Breakpoints

 variable window

 Stepping and Data Viewing

 Tracing and Handling Page-level errors

 Tracing and Handling Application-level errors

 Logging onto File/Server/Database

**Module 72: Creating a Common Layout using Master Pages in ASP.NET**

 Describe the concept of a Master Page

 Describe the concept of a Content Page

 Design Master Pages

 Configure Content Pages

**Module 73: Caching**

 Using Cache Object

 Using ASP.NET Output Caching

 Data Caching

 Cache Dependency

**Module 74: Securing a Microsoft ASP.NET Web Application**

 Web Application Security Overview

 Working with Windows-Based Authentication

 Working with Forms-Based Authentication

 Overview of Microsoft Passport Authentication

 Implementing Security to parts of a Web Application

**Module 75: State Management in ASP.NET**

 Session Objects

 Application Objects

 Cookies and Cookieless Session

 Query String

 View State

**Module 76: Creating and Consuming Web Services**

 The Need for Web Services

 Evolution of Distributed Application

 Problems with Traditional Distributed Application

 Introducing Web Services

 The Web Technology Stack and .NET

 The .NET Alternative to Web Services

 Common Web Services Scenarios

 Web Services Architectures

 Service-Oriented Architecture

 Web Service Architectures and Service-Oriented Architecture

 Roles in a Web Service Architecture

 The Web Services Programming Model

 The Underlying Technologies of Web Services

 HTTP Fundamentals

 XML Essentials

 SOAP Fundamentals

 Consuming Web Services

 WSDL Documents

 Web Service Discovery

 Web Service Proxies

 Implementing a Web Service Consumer Using Visual Studio.NET

 Implementing a Web Service Consumer for Non-.NET Client

 Implementing a Web Service

 Creating a Web service Project

 Implementing Web Service Methods

 Implementing Web Service Methods, Exposing Them and Controlling Their

Behaviour