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# ADVANCED .NET COURSE CURRICULUM





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Start your career with .Net course that gets your  
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# Become Microsoft.Net Certified Professional

It is only skills and not degree that can help you grow. But if you are one of those individuals who believe in getting certified along with skills then we have got you covered. After completion of the training you will become an expert in .Net.

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-  Windows Store application development
-  Web application development
-  MCSD (Microsoft Certified Solution Developer)
-  Industry Recognized Inventateq Certification

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Trainees

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Batches

4.9/5  
Ratings

# 18,599+ Success Stories

Here is what they say about INVENTATEQ.



Thanks for the best Training. Now I can able to crack all the interviews with my gained knowledge. I'm very happy to be the one of the student in Inventateq Bangalore...

**KARTHIK**



Hi friends, my name is Rajesh and I am one of the students of Inventateq. Past month I did Core .NET Course. They provide practical oriented coaching and Hari sir taking class superbly. Inventateq has shown me placements also. Thanks to Inventateq btm branch.

**RAJESH**



Best Microsoft .net job oriented training center in Bangalore. I Got placed in HP! Thanks to trainer sir! I am a 2014 batch passed out from tirupati. I joined the asp.net, c#.net and advanced .net mvc training course in Inventateq marathahalli class room. I got the best training from an industry expert.

**SWARNA**



I did advanced .net wcf wpf mvc Course in Inventateq btm layout. I really impressed with the way Coaching provided. Teacher is purely concentrate on Real time training for fresher's. Very helpful to crack interviews

**SURESH**

# 18,599+ Success Stories

Here is what they say about INVENTATEQ.



I'm Sunil. I did complete .Net course in Inventateq. Sessions are good, Trainer is supportive. They helped me in real time project also.

**SUNIL**



I joined Inventateq and attending .net classes. I am very happy with the classes. It is a good place to learn coding. Trainers are very helpful.

**SUSHMITHA**



My name is Varun. I have attended the .Net Class. Its been an exhilarating experience. I got to learn it clean and clear. It has inspired me enough to go ahead and learn this completely. thank you

**VARUN**



The course is very good and explaining was good also we learn new concepts in .Net. The realtime project experience was Excellent.

**SANKAR K**

# TRAINING PROCESS



THEORY



PRACTICALS



ASSIGNMENTS



CERTIFICATION



RESUME PREPARATION



ATTEND INTERVIEW



YOU GOT THE JOB!

# Detailed Course Syllabus

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<b>1</b>	Core DotNet (C#, ASP.NET, ADO, SQL Server, VB.net)
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<b>4</b>	WCF
<b>5</b>	WPF
<b>6</b>	Entity Framework

# Core DotNet

## C#.NET .NET Enterprise Architecture

- NET Framework
- Base Class Libraries (BCL)
- Common Language Run Time (CLR)
- Microsoft Intermediate Language (MSIL)
- Common Language Specification (CLS)
- .NET Products
- .NET Services
- Class and Object
- Constructors
- Destructors
- Method Overloading
- Method Overriding
- Early binding, Late binding
- Abstract Classes
- Abstract Methods

## C# Languages Basics

- Data Types
- Type Conversion
- Boxing & Unboxing
- Conditional Statements
- Looping
- Methods in C#
- Properties
- Arrays
- Indexes
- Structures, Enumerations
- Strings
- Regular Expressions
- Collections

## Object Oriented Language

- OOPS Concepts
- Encapsulation
- Inheritance
- Polymorphism

## Memory Management

- Garbage Collector Stack and Heap
- System. Object Class
- Architecture of Gc
- Generations
- Exceptional Handling
- System Defined Exceptions
- Custom Exceptions
- Try, Catch, Finally
- Throwing Exceptions

## Operator Overloading

- Unary Operator
- Binary Operator

## GUI Applications Development

- Windows forms and controls
- Creating Menus
- Toolbars, Image list
- Tree View, List view

## Data Base Programming

- ADO.NET Introduction
- Data Providers in .NET
- Connection, Command
- Data reader
- Data Adapter
- Data Set
- Command Builder
- Data Relations
- ADO.NET and XML

## Assemblies

- Private Assemblies
- Shared Assemblies
- Global Assembly Cache (GAC)

## Architecture of CLR

- Components in CLR
- Type Safety

## Delegates and Event Handling

- Function Pointers
- Multi cast delegates
- Generic Routines
- Event Handling
- Pointers
- Value types, Reference types
- Unsafe

## File Handling

- System. IO namespace
- File Stream
- Stream Reader
- Stream Writer
- File info
- Directory info

## ASP.Net

- Introduction to web applications
- State management techniques, Session & ViewState
- Response.Redirect & Server.Response
- Query strings

## SQL Server

- RDBMS concepts
- Tables and data storage
- Anomalies and Normalization techniques.
- 1NF, 2NF, 3NF
- Relations
- Primary key, Foreign key
- Different data types in SQL Server
- Create, Read, Update & Delete data in tables (SQL Queries)
- Group by, Order by on records.
- Aggregation operations
- Numeric operations
- Operators
- String operations
- Datetime operations

- Exception handling
- User defined data and table types
- Temp tables
- Triggers
- Stored procedures
- Functions

### UML techniques

- Use case diagram
- Class diagram
- Sequence diagram

### NUnits

- Test classes
- Test methods

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# 02

## Advance .Net Course Outline

### Introduction to ASP.NET

- From ASP to ASP.NET
- Web Forms
- Web Services
- ASP.NET Features

### Web Forms Architecture

- Page Class
- Web Forms Life Cycle
- Web Forms Event Model
- Code-Behind

### ASP.NET and HTTP

- Request/Response Programming
- HttpRequest Class
- HTTP Collections
- HttpResponse Class
- Redirection
- HttpUtility Class

### Web Applications Using Visual Studio

- Using Visual Web Developer
- Visual Studio Forms Designer
- Using Components
- Shadow Copying
- Using the Global.asax File
- Data Binding

### State Management and Web Applications

- Session State
- Application State
- Multithreading Issues
- Cookies

### Server Controls

- HTML Server Controls
- Web Forms Server Controls
- Rich Controls
- Validation Controls
- User Controls

### Caching in ASP.NET

- What Is Caching
- Page-Level Caching
- Page Fragment Caching
- Optimizing Your ASP.NET Application
- Application Caching

### ASP.NET Configuration and Security Fundamentals

- Configuration Overview
- Authentication and Authorization
- Forms Authentication
- Windows Authentication
- Security and ASP.NET

## More Server Controls

- Most recent ASP.NET Controls
- Menus
- Master Pages

## ADO.NET and LINQ

- ADO.NET Overview
- .NET Data Providers
- Connections
- Commands
- DataReaders and Connected Access
- Data Sets and Disconnected Access
- Language Integrated Query

## Data Access in ASP.NET

- Data Source Controls
- Connection String Storage
- GridView
- DetailsView
- FormView
- Object Data Sources
- ListView
- DataPager
- LinqDataSource

## Personalization and Security

- Configuration Overview
- Themes
- Skins
- Security in ASP.NET
- Membership and Roles
- Login Controls
- User Profiles

## Introduction to ASP.NET AJAX

- Rich Client Applications
- AJAX
- ScriptManager

- UpdatePanel
- AJAX Client Library
- Remote Method Calls
- AJAX Control Toolkit

## HTTP Pipeline

- Pipeline Architecture
- Context
- Applications
- Handlers
- Modules

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# 03

## ASP.Net MVC Level 1

### Introduction to ASP.NET MVC

- The role of the Model, View, and Controller
- Key benefits of ASP.NET MVC

### Getting Started with ASP.NET MVC

- ASP.NET MVC project templates
- Understanding the structure of an ASP.NET MVC project
- Naming conventions
- Creating views
- Defining controllers
- Defining a data model

### Creating a ASP.NET MVC 4 Application

- Creating strongly-typed views
- Understanding URLs and action methods
- Using HTML helpers
- Handling form post-backs
- Data validation

### Using the Razor View Engine

- Getting started with Razor
- Razor design goals
- Implementing a Razor view
- Razor syntax
- Accessing Model Data in Razor Views

### Industrial-Strength ASP.NET MVC Applications

- ASP.NET application architecture best practices
- Implementing a Repository and Entity Framework Data Model
- Using Dependency Injection
- Implementing a custom controller factory

### View Techniques

- Defining and using custom HTML Helpers
- Defining a layout / MVC Master Page
- Using Styles
- Defining and using partial views
- Razor Helper Method syntax
- Custom Sections
- Partial Views
- Child Actions
- Using a ViewModel Object

### Implementing Navigation in MVC web apps

- Defining view-model classes
- Implementing Data Filtering in a Controller
- Understanding the Routing mechanism
- Adding custom entries to a route table
- Defining defaults, parameters, and validation
- Generating URLs and Hyperlinks
- Custom Route constraints

## MVC State Management

- Using hidden fields
- Session and Application State
- Custom model bindings

## Additional Techniques

- View Scaffold Templates
- Controller Scaffold Templates
- Global Filters
- Model binding
- Asynchronous Controllers

## Using AJAX and jQuery with ASP.NET MVC

- Overview of AJAX and ASP.NET MVC
- Unobtrusive AJAX
- Using AJAX Action Links
- Overview of jQuery
- jQuery Techniques
- Using jQuery UI

## ASP.NET MVC & LINQ - working with Data

- Language features used in LINQ
- Creating simple LINQ queries
- Using LINQ queries in a Web application;
- Defining a data repository;
- Using LINQ to define a data access component

## ASP.NET MVC 4 Techniques & Best Practices

- View scaffold templates
- Controller scaffold templates
- Dependency injection

## ASP.NET Web API with MVC

- Overview of the ASP.NET Web API
- Building servers and clients
- Content negotiation
- Validation
- Query able Interfaces
- Dependency Injection

## Customizing and Extending ASP.NET MVC

- ASP.NET MVC Pipeline
- Advanced Routing
- Custom Global Filters
- Customizing MVC Code Templates
- Creating a Custom Controller Factory

## Deployment

- Server Requirements
- Configuration Options
- Preparing an application for deployment
- Deploying to IIS and Windows Azure

# 04

## Course Outline for WCF

### Introduction to WCF

- What is WCF?
- Why is WCF?
- Address, Binding and Contract
- WCF Services and Clients
- WCF Architecture

### Addresses and Bindings

- Addresses
- Bindings
- Message Exchange Patterns
- Configuring Bindings
- Interoperating with ASMX Web Services
- Hosting in a Console Application
- Channel Factories
- Multiple Endpoints

### Service Contracts

- Defining Service Contracts
- Defining Operation Contracts
- Services With Multiple Contracts
- Contract Inheritance
- Operation Overloading

### Instance Management

- Using Per-Call Services
- Using Per-Session Services
- Using Singleton Services
- Configuring Behaviors

### Data Contracts

- Implementing Data Contracts
- Mapping Data Contracts to XSD Schema
- Serialization
- Arrays and Generic Collections
- Enums
- Versioning Data Contracts

### More about Service Contracts

- Versioning Service Contracts
- Implementing Message Exchange Patterns
- Oneway Contracts
- Duplex Contracts
- Asynchronous Proxies

### Handling Errors

- Faults and Exceptions
- Generating and Handling Faults
- Fault Contracts
- Faults and Sessions

### Security

- Security Behaviors and Bindings
- Securing Clients and Services

### Deploying WCF

- Installing WCF Services
- Upgrading Services
- Troubleshooting WCF installation

# 05

## Course Outline for WPF

### Introduction to WPF

- Why WPF?
- What Is WPF?
- .NET Framework 3.0 (WinFX)
- WPF Overview
- Application and Window
- A Simple WPF Application
- Using Visual Studio
- Brushes
- Panels

### XAML

- Role of XAML
- Elements and Attributes
- Namespaces
- Property Elements
- Type Converters
- Content Property
- Collections
- XAML and Procedural Code

### WPF Controls

- Button
- Label
- TextBox
- ToolTip
- RadioButton
- CheckBox
- ListBox
- ComboBox

### Layout

- Sizing
- Positioning
- Transforms
- Canvas
- Drawing Shapes
- StackPanel
- WrapPanel
- DockPanel
- Grid
- Scrolling
- Scaling

### Dialogs

- Message Boxes
- Win32 Common Dialogs
- Custom Modal Dialogs
- Custom Modeless Dialogs

### Menus and Commands

- Menus
- Context Menus
- Icons on Menu Items
- Commands
- Keyboard Shortcuts
- Disabling Menu Items
- Checking Menu Items

### Toolbars and Status Bars

- Toolbars
- Toolbars and Commands
- Status Bars

## Dependency Properties and Routed Events

- Dependency Properties
- Change Notification
- Property Value Inheritance
- Support for Multiple Providers
- Routed Events
- Routing Strategies

## Resources

- Resources in WPF
- Binary Resources
- Logical Resources
- Static versus Dynamic Resources

## Styles, Templates, Skins and Themes

- Styles
- Style Sharing
- Triggers
- Templates
- Templated Parent's Properties
- Skins
- Themes

## Data Binding

- Binding Sources
- Sharing Sources with DataContext
- Data Templates
- Value Converters
- Collection Views
- Data Providers
- Validation Rules

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# 6 CENTERS AND COUNTING

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