

# Course Outline



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## .NET Overview

### Course Description:

This one-day, information-packed seminar provides an overview of Microsoft's new .NET technology. It should prove of value to developers and managers who are starting on a .NET project or who are evaluating this technology. The course is designed to run using .NET 3.5 and Visual Studio 2008. The seminar includes demonstrations of the development of Web applications and services and programming in C# and VB.NET using Visual Studio 2008.

Audience:

Developers and managers who need a technical overview of .NET.

### Pre-requisites:

Attendees should be experienced software developers, architects or managers.

### Course Content:

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- **What Is Microsoft .NET?**
  - What is .NET?
  - Open Standards and Interoperability
  - Windows Development Problems
  - Common Language Runtime
  - Attribute-Based Programming
  - Metadata
  - Types
  - .NET Framework Class Library
  - Interface-Based Programming
  - Everything is an Object
  - Common Type System
  - Language Interoperability
  - Managed Code
  - Assemblies
  - JIT Compilation
  - ASP.NET and Web Services
  - The Role of XML
  - Performance
  
- **Visual Studio 2008**
  - Overview of .NET Framework 3.0
  - .NET 3.0 Block Diagram
  - Visual Studio 2008
  - Visual Studio 2008 Versions
  - Visual Studio 2008 Team System
  - A Tour of Visual Studio 2008
  - Project Templates
  - A New Windows Form Application
  - Windows Form Designer
  - Completed Form
  - Solutions with Multiple Projects
  - Referencing the Class Library

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Registered Office: Grenville Court Britwell Road Burnham Bucks SL1 8DF Company Registered No: 2442290 – VAT registration No:532 1929 56

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- **Visual Studio 2008**
  - Windows Forms Event Handling
  - Add Event Handlers for a Control
  - Code for Event Handler
  - Running the Application
  - New Web Project Templates
  - Reporting Project Templates
  - WCF Project Templates
  - Other Project Templates
  - Other Designers
  
- **.NET Languages**
  - Visual C#
  - C# Overview
  - Namespaces
  - Program Structure
  - Classes
  - Properties
  - Using a Property
  - Static Members
  - Inheritance in C#
  - Class Diagrams
  - Access Control and Assemblies
  - Types in C#
  - Reference Types
  - Boxing and Unboxing
  - Exceptions
  - Interfaces
  - Using an Interface
  - as Operator
  - .NET and COM
  - Windows Forms
  - Events in Windows Forms

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- **.NET Languages**
  - Delegates
  - Implicitly Typed Variables
  - C# Advantages and Disadvantages
  - Visual Basic (.NET)
  - Program Structure
  - Visual Basic and C#
  - Advantages and Disadvantages of Visual Basic
  - Visual C++ (.NET)
  - C++/CLI Advantages and Disadvantages
  - JScript .NET
  - JScript .NET Advantages and Disadvantages
  - Building .NET Programs
  - What Happened to Visual J#?
  - Dynamic Language Runtime
  - Mixing .NET Languages
  - A List of Contacts
  - Generic Collection in Visual Basic
  
- **Data Access**
  - ADO.NET
  - ADO.NET Architecture
  - .NET Data Providers
  - ADO.NET Interfaces
  - Connected Data Access
  - Contacts Database
  - Creating a Connection
  - Using Server Explorer
  - Performing Queries
  - Connecting to a Database
  - Using Commands
  - Using a Data Reader

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- **Data Access**

- Executing Commands
- DataSet
- DataSet Architecture
- Why DataSet?
- DataSet Components
- DataAdapter
- Language Integrated Query (LINQ)
- Bridging Objects and Data
- Object Relational Designer
- IntelliSense
- Basic LINQ Query Operators
- Obtaining a Data Source
- Deferred Execution
- XML in .NET
- LINQ to XML
- Querying an XML Document

- **Windows Development**

- Creating Windows Forms App
- Partial Classes
- Windows Forms Event Handling
- Add Events for a Control
- Events Documentation
- Closing a Form
- ListBox Control
- Windows Presentation Framework
- Why WPF?
- When Should I Use WPF?
- WPF and .NET Framework 3.5
- Core Types and Infrastructures
- XAML
- Controls

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- **Windows Development**
  - Data Binding
  - Appearance
  - Layout and Panels
  - Graphics
  - Media
  - Documents and Printing
  - Windows1.xaml
  - Windows1.xaml.cs
  
- **Web and Distributed Development**
  - Anonymous Access
  - Multiple Versions of .NET
  - Server Side Web Application
  - Web Forms
  - Visual Web Developer
  - Web Form Source
  - Page Layout
  - Default.aspx File
  - ASP.NET Development Server
  - Server-Side Code
  - Running under IIS
  - Collaborative Web Applications
  - Collaborative Web Technologies
  - SOAP
  - Web Services
  - An .asmx File
  - Code-Behind File
  - A Web Service Client
  - What is WCF?
  - WCF Services
  - Service Orientation
  - WCF and Web Services

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- **Web and Distributed Development**
  - What is Workflow?
  - Windows Workflow Foundation
  - Workflow Designer
  - Client-Side Web Technologies
  - Dynamic Pages
  - Efficient Page Redraws
  - AJAX
  - Google Maps
  - ASP.NET AJAX
  - What is Silverlight?
  - Silverlight and AJAX
  - Silverlight and Flash

**Course Duration:**

**1 Days**