

# Introduction to WCF Using Visual Basic (3 Days) CTI 4253

*This course covers the essentials of the technology of Windows Communication Framework (WCF), Microsoft's new framework for building distributed systems. WCF enables developers to produce highly configurable, secure, reliable and transactional services using a single simplified programming model.*

*Prerequisites: Good working knowledge of building .NET applications with C#. Knowledge of building distributed systems and Web services will also be helpful.*

*Minimum software requirements: Visual Studio 2005, .NET 3.0 components, Windows SDK for .NET 3.0, and Visual Studio extensions for .NET 3.0.*

*Minimum hardware requirements: Pentium PC running at 2 GHz; 512 Mb RAM; 4 GB free hard disk space before installation.*

*Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.*

## **Module 1: Introduction to WCF**

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

## **Module 2: Addresses and Bindings**

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

## **Module 3: Service Contracts**

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

## **Module 4: Instance Management**

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

## **Module 5: Data Contracts**

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

## **Module 6: More About Service Contracts**

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

## **Module 7: Handling Errors**

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