

**Course Title: New Features in C# 2.0**

**Duration: 2 days**

This program is designed for the software developers who are experienced with C# 1.x, and want to learn the new features of C# 2.0 (part of Visual Studio 2005).

### Program objectives

This program will introduce the participants to some of the important new features of C#, such as:

- Partial types
- Static classes
- Generics
- Iterators
- Compression and Decompression classes

### Audience

Experienced C# developers who need to learn the new features introduced in C# 2.0.

### Course Summary

Day	Module	Topic
Day 1	<a href="#">Module 1</a>	Getting Started
	<a href="#">Module 2</a>	New Features for Classes and Datatypes
	<a href="#">Module 3</a>	Anonymous Methods
	<a href="#">Module 4</a>	Generics
Day2	<a href="#">Module 5</a>	Iterators in C#2.0
	<a href="#">Module 6</a>	New Features in ADO.NET
	<a href="#">Module 7</a>	IO in C#

## Course Contents

### Module 1: Getting Started

- .NET as complete development platform
- Components of .NET Framework
- New Compact Framework
- Features of the Compact Framework

### Module 2: New Features for Classes and Datatypes

- Partial types
- Basis for “code-behind”
- Usage of partial classes
- Static classes
- Nullable types

### Module 3: Anonymous Methods

- Anonymous methods for in-place coding
- Method blocks
- Anonymous methods and delegates

### Module 4: Generics

- Understanding generics
- Type-independent coding using generics
- Comparison with C++ templates
- Type-safe collection classes
- Generics for structs, interfaces and delegates
- Defining permissible actions for generic types via constraints (class, interface, new)
- Helper classes (e.g. IComparer<T>)
- Generic methods & inference

### Module 5: Iterators in C#2.0

- Review of .NET enumerators
- The C# 2.0 Iterator concept
- The “yield return” and “yield break” options

### Module 6: New Features in ADO.NET

- Relations between Dataset and DataReader objects
- Using the Common Provider Model
- Batch update feature of ADO.NET
- SqlBulk Copy
- Multiple Active ResultSet objects

### Module 7: IO in C#

- The Compression and Decompression classes