C# Programming Introduction	5 Days

Course Aims:

This course is designed to provide developers, who already have some C, C++, Java or Visual Basic experience, with the experience they need to develop C# applications for the Microsoft .NET platform.

Course Outline:

Overview of The Microsoft .NET Platform:
- The .NET platform
- The .NET framework
- The Common Language Runtime environment

Overview of C#:
- Introduction to the C# language

Overview of Visual Studio .NET:
- Structure of C# programs
- Sample C# program
- Namespaces
- XML comments

Variables Operators & Expressions:
- Naming variables
- Logic states; relational operators
- Built in data types
- Arithmetic operators
- Increment & decrement operators
- Operator precedence

Statements & Exceptions:
- Decision statements
- Selection statements
- Iteration statements
- Handling exceptions
- Raising exceptions

Methods and Parameters:
- Writing methods
- Parameters
- Overloading methods
- The method wizard

Classes & Objects:
- The principles of OOP
- C# & OOP
- Creating & destroying objects
- Class constructors
- Static class members

Reference & Value types:
- Using reference type variables
- The stack & heap
- System.Object
- Boxing & unboxing

Enumerations & Structures:
- Enumerations
- Structs

Arrays & Collections:
- Overview of arrays
- Creating & initialising arrays
- Using arrays
- The System.Array class
- Collections overview
- ArrayList, Queue, Stack, SortedList classes
- Arrys as method parameters

Inheritance & Polymorphism:
- Deriving classes
- Polymorphism
- Virtual methods
- Interfaces
- Abstract classes
- Sealed classes

Properties & Indexers:
- Implementing properties
- Using indexers

Delegates Events & Operators:
- Operator overloading
- Creating & using delegates
- Defining & using events

File I/O:
- Text files
- Binary files

Target Audience:

Systems and applications programmers who will be developing systems in C#. Anyone who wants a practical understanding of C# will benefit from this course. It is suitable for software developers who want to expand their knowledge in a powerful all-purpose language.

Assumed Knowledge:

Participants should have a good knowledge of programming techniques and at least one programming language such as C, C++, Java or Visual Basic