

## C# Developer

**Duration: 5 Days**    **Course Code: C-SHARP**    **Delivery Method: Virtual Learning**

---

### Overview:

#### C# Developer Course Overview

The C# Developer course comprises sessions dealing with C# applications, variables and operators, decision and loop constructs, arrays, enums, methods, objects, classes, structs, delegates, events, object-oriented principles, exception handling, file IO, LINQ. Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

#### Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

---

### Target Audience:

#### Who will the Course Benefit?

This course is aimed at anyone who wants to learn C# as a first language and developers who want to migrate to C# from another language, particularly those with little or no object-oriented knowledge.

---

### Objectives:

- Course Objectives
  - This course aims to provide the delegate with the knowledge to be able to produce simple C# applications that exploit the core elements of the language including variables, expressions, selection and iteration, arrays, methods, classes and objects, structs, encapsulation, inheritance and polymorphism, exceptions, file IO and LINQ.
- 

### Prerequisites:

- Delegates attending this course should have some previous programming experience and be able to define general programming concepts including compilation, execution, variables, arrays, sequence, selection and iteration, navigate the filesystem (on the command line ideally), edit and save text files and browse the web. This knowledge can be obtained by attendance on the pre-requisite Introduction to Programming course.
- 

### Follow-on-Courses:

#### Further Learning

- ASP.NET Core
-

## Content:

### C# Developer Training Course Course Contents - DAY 1

#### Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

#### Session 1: INTRODUCING C#

- History of the Language
- C# and .NET
- Common Intermediate Language
- Common Language Runtime
- Compiling and Running Code
- Development tools

#### Session 2: VARIABLES

- Using Namespaces
- Declaring Variables
- Value and Reference Types
- Datatypes
- Variable Scope

#### Session 3: OPERATORS

- Arithmetic Operators
- Unary Operators
- Concatenation Operators
- Comparison Operators
- Logical Operators

#### Session 4: DECISIONS

- If Statements
- Switch Statements C# Developer Training Course Course Contents - DAY 2

#### Session 5: LOOPS

- Types of Loop
- Break and Continue Statements

#### Session 6: ARRAYS AND ENUMS

- Populating Arrays
- Looping Through Arrays
- Working with Enums

#### Session 7: METHODS

- Fields and Methods
- Method Parameters
- Method Overloading
- Optional Parameters

#### Session 8: OBJECTS

- Creating Objects
- Instance Fields
- Instance Methods C# Developer Training Course Course Contents - DAY 3

#### Session 9: CLASSES AND STRUCTS

- Class Structure
- Constructors
- Using Structs

#### Session 10: ENCAPSULATION

- Access Modifiers
- Getters and Setters
- Properties

#### Session 11: STATIC MEMBERS

- Static Fields
- Static Methods
- Static Classes
- Static Context

#### Session 12: INHERITANCE AND POLYMORPHISM

- Object Oriented Programming
- Extending Classes
- Inheritance Modifiers
- Polymorphism C# Developer Training Course Course Contents - DAY 4

#### Session 13: ABSTRACTION AND INTERFACES

- Abstract Methods
- Abstract Classes
- Using Interfaces
- Interface Polymorphism

#### Session 14: EXCEPTION HANDLING

- Throwing Exceptions
- Catching Exceptions
- Using try, catch and finally
- Custom Exceptions

#### Session 15: STRINGS AND DATES

- The String Class
- Using StringBuilder
- Date Handling
- Formatting Numbers

#### Session 16: COLLECTIONS

- Working with Collections
- Generic Collections
- The List Class
- The Dictionary Class C# Developer Training Course Course Contents - DAY 5

#### Session 17: DELEGATES, LAMBDA AND EVENTS

- Creating Delegates
- Lambda Expressions
- Events and Event Handlers

#### Session 18: FILE IO

- I/O Streams
- Handling Files
- Serialising and Deserialising Data

#### Session 19: LINQ

- Query Expressions
- Ordering and Projection
- Grouping and Joins
- LINQ to XML

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

[info@globalknowledge.co.uk](mailto:info@globalknowledge.co.uk)

[www.globalknowledge.com/en-gb/](http://www.globalknowledge.com/en-gb/)

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK