



(A Venture of Chandigarh ETC Services Pvt. Ltd.)

An ISO 9001:2015 Certified Organisation with Completely Online Management System

Website : www.citcchandigarh.com

Course Syllabus: Certificate in Language C#

Batch Name: Language C#

Eligibility: 10th

Course Start: 1st of Every Month

Course Duration: 30 Hours

Courses / Modules Paper

Paper 1
Language C#

Module 1:

Paper 1: Language C#

1: Getting Started with C#

- 1.1 What is C#?
- 1.2 Preparing to program
- 1.3 The program development cycle
 - Creating source code
 - Using editor
 - Naming source file
 - Understanding execution of code
 - Completing the development cycle
- 1.4 Creating your first program
 - Entering and compiling code
 - Understanding compilation errors
 - Understanding logical errors
- 1.5 Types of C# programs
- 1.6 Creating your first window application
- 1.7 Why C#?
- 1.8 C# and OOP

2: Understanding C# programs

- 2.1 Dissecting a C# program
 - Comments
 - One line comments
 - Documentation comment
- 2.2 Basic parts of C# Application
 - Formatting and white space
 - C# keywords
 - Literals
 - Identifiers
- 2.3 Structure of C# application
- 2.4 Storing information with variables
 - Naming variables
 - Using variables
 - assigning value to variable
 - Uninitialized variable
- 2.5 Data types
- 2.6 Literals vs variables
- 2.7 Constants

3: Manipulating values in your program

- 3.1 Displaying basic information
- 3.2 Manipulating variable values with operators
- 3.3 Types of operator
 - Unary operator
 - Binary operators
 - Ternary operator
- 3.4 Understanding operator precedence
- 3.5 Converting data types

4: Controlling your program flow

- 4.1 Controlling program flow
- 4.2 Using selection statement

- If statement
- Nested if
- If else
- Nested if else
- Switch statement

4.3 Using iteration statements

- While
- Do while
- For
- Foreach

4.4 Jumping statements

- Break
- Continue
- Goto

5: A core of C#: Classes

4.1 Object Oriented Programming

- Encapsulation
- Polymorphism
- Inheritance
- Reuse

5.2 Objects and classes

- Defining a class
- Declaring a class
- Members of class
- Working with data members
- Using classes as data members
- Nested classes

5.3 Using static variables

5.4 Inspecting the application class

5.5 Creating properties

5.6 Namespaces

5.7 Nested namespaces

6: Packaging functionality

6.1 Getting started with methods

6.2 Using methods

6.3 Understanding program flow with methods

6.4 Exploring the format of a methods

6.5 Passing values to methods

6.6 working with static methods

6.7 Types of class methods

- Property accessor methods
- Constructors
- Destructors

7: Structures, Enumerators and Arrays

7.1 Working with structures

- Difference between structures and dclasses
- Structure members
- Nesting structures
- Structure methods
- Structure constructors

7.2 Enumerators

- Changing the default value of enumerators

7.3 Using arrays to store data

- Creating arrays
- Multidimensional arrays
- Creating different sized array
- Using arrays in classes and structures
- Using foreach statement

8: Advanced Method Access

8.1 Overloading methods

8.2 Overloading functions

8.3 Overloading Constructors

8.4 Understanding method signatures

8.5 Using a variable number of parameters

8.6 Command line arguments

8.7 Understanding scope

8.8 Creating classes with no objects

8.9 Revisiting Namespaces

- Naming a namespace
- Declaring a namespace
- Using keyword

9: Exception and Errors

9.1 Understanding the concept of handling Problems

- Preventing Errors via Logical Code
- What causes exception?

9.2 Exception handling

- Using try and catch
- Catching exception information
- Using multiple catches with single try
- Order of handling exception

9.3 Finally keyword

9.4 Common exception

9.5 Defining your own exception classes

9.6 Throwing your own exception

9.7 Checked versus unchecked statements

9.8 Debugging

9.10 Types of Errors

9.11 Finding errors

10: Overloading

10.1 Overloading functions

10.2 Overloading Operators

- Creating overloaded operators

11: Creating Windows Forms

11.1 Working with windows and forms

11.2 Creating windows forms

- Compiling form
- Analyzing your first windows Application form
- Understanding the application.Run Method

11.3 Customizing a Form

- Customizing the caption bar on a form
- Sizing a form

- Changing the form's border
- 11.4 Adding controls to form
- Working with labels and text display
 - Working with buttons
 - Working with text boxes
 - Working with other controls

12: Creating Windows Application

- 12.1 Working with radio buttons
- Grouping radio buttons
- 12.2 Working with containers
- 12.3 Working with list boxes
- Adding items to list
- 12.4 Adding menus to your forms
- Creating basic menus
 - Creating multiple menus
 - Using checked menus
 - Creating pop-up menus
- 12.5 Displaying pop-up dialog boxes and forms
- Working with MessageBox class
 - Using pre-existing microsoft windows Dialog boxes
 - Pooping-up your own dialog box

13: Working with Databases

- 13.1 Understanding database
- Understanding terminology
- 13.2 Introducing ADO.NET
- 13.3 Making connection to database
- Executing a command
 - Retreiving data with DataReader
- 13.4 Closing database
- 13.5 Adding, updating and deleting data
- 13.6 Other database concepts

