# Certified Software Developer Foundation C#

By obtaining GSDC Certifications, both current and aspiring software professionals can enhance their proficiency as members of software development teams and write sustainable code.

**GSDC**
Global Skill Development Council

**CSDF**
C#

CERTIFIED

# Certified Software Developer Foundation C#

## ABOUT CERTIFICATION

Possessing a GSDC certificate enables individuals to apply a full-stack approach to actual software development projects.

C# is a highly versatile programming language that serves as a Swiss Army Knife in software development. It is designed to support various software development types, including web, mobile, and app development, while also being simple to learn. C# allows developers to create .NET applications that can be easily deployed across different platforms, including Windows, Linux, Mac, and cloud-based environments, as well as in containers.

## OBJECTIVES

1. To know the working understanding of software development.
2. To know the tools and best practices in software development.
3. To enhance your programming and technical skills.
4. How to write error-free code.
5. How to test and debug software and web application.
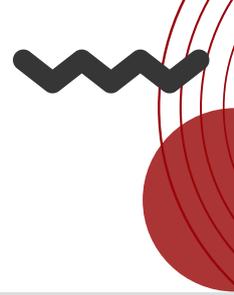6. Use of the latest tools and concepts in application development.

## Our Accreditation:

The Global Skill Development Council (GSDC) is the leading third-party, Vendor neutral, international credentialing and certification organization. The Global Skill Development Council (GSDC) is proud to be ANSI Accredited Member.
The American National Standards Institute (ANSI) is a private, non-profit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system.

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# COURSE SYLLABUS

**1. Introduction to Visual Studio**
**How to get started with Visual Studio**
- Introduction to the .NET Framework
- A tour of the Visual Studio IDE
- How to test a project

**How to design a Windows Forms Application**
- Visual Studio Options and Settings
- Creating new projects

**How to design a Windows Forms Application**
- Introduction to object-oriented programming
- Properties, methods, and events
- How an application responds to events
- Coding a form
- How to run, test, and debug a project

**2. The C# language essentials**
**How to Work with Numeric and String Data**
- Built-in value types
- Declaring and initializing variables and constants
- Arithmetic expressions
- Assignment statements
- Casting
- Using the Math class

**How to code control structures**
- Boolean expressions
- Conditional statements
- Loops

**How to code methods and event handlers**
- Coding and calling methods
- Parameterizing methods
- Refactoring code into a method
- Passing arguments by value and by reference to a method

**How to handle exceptions and validate data**
- How exceptions work
- Using Structured exception handling
- Validating data

**How to use Arrays and Collections**
- One-dimensional arrays
- Multi-dimensional arrays
- Jagged arrays
- Collections

**5. Object-Oriented Programming**
**How to create and use classes**

- Introduction to classes
- Adding classes to a project
- Adding class members
- Fields
- Properties
- Methods
- Constructors
- Static Members
- Diagraming classes
- Structures

**How to work with Inheritance**
- How inheritance works
- Creating base and derived (sub) classes
- Polymorphism

**6. Database Programming**
**An introduction to database programming**

- Components of a client/server system
- Introduction to relational databases
- Using SQL
- Introduction to ADO.NET

**How to use ADO.NET to write your own data access code (If Time Permits)**
- Connections and Commands
- Parameterized SQL Statements
- Executing Commands

# GSDC Technical Advisory Board :



The GSDC is the leading certification association which brings together innovative organizations and founding thought-leaders as Technical Advisors from over 40 countries to design curriculum on Blockchain, Devops, Six Sigma & Agile Certifications.

## Our Future Information
## Target Audience

- GSDC Certification is for all those who want to prove they can apply their entry-level Java developer skills into real-life projects.
-  Examples of typical job titles with 0-2 years of experience:
- Junior Software Developer
- Junior Software Engineer
- Junior Web Developer
- Junior Android Developer
- Junior Front-end Developer
- Junior Full-Stack Developer

**Find out more online at**
**www.gsdcouncil.org**