

# C++ PROGRAMMING FULL COURSE



[www.gtceducation.com.sg](http://www.gtceducation.com.sg)

## Course Overview

The intent of this course is to familiarize students with the fundamentals of Object Oriented Programming concept in C++ Programming. The course covering the basics of C++ and going deeper into the OOPS concepts like Class ,Objects, Inheritance, polymorphism, Templates, Pointers and File organization .The course curriculum is designed as a combination of theory and practical.

<b>Entry Requirement</b>	: Basic computer knowledge
<b>Course Duration</b>	: 40hrs.
<b>Mode of Training</b>	: Face to face Instructor led Training
<b>Materials</b>	: Course books will be provided to each participant

## Course Content

### Module1: Fundamentals of Object-Oriented Programming

- Introduction to Class and Object
- Procedure-oriented Programming Concepts
- Object-oriented Programming Concepts

### Module 2: Basics of C++

- Data Type
- Variables
- Constants
- Operators
- Comments in C++

### Module 3: Statements in C++

- Assignment Statement
- Input and Output Statement
- Control Statement
- Selection or Conditional Statement
- Iteration or Looping Statements
- Breaking Control Statements

1 Sophia Road, #02-03, Peace Centre, Singapore 228149.

Phone: 63360244, 9650 3505, Email: [Info.sg@gtceducation.com](mailto:Info.sg@gtceducation.com)

Registered with Committee for Private Education (CPE) is part of SkillsFuture Singapore (SSG)

#### **Module 4: Functions**

- Function declaration
- Function definition
- Function call
- Parameter Passing Mechanism
- Recursive function

#### **Module 5: Arrays**

- Array declaration
- Single dimension arrays
- Multidimensional arrays
- Character arrays
- Arrays and Functions

#### **Module 6: Union and Bit Fields**

- Declaration of a structure
- Initialization of a Structure,
- Array within structure
- Union
- Bit Field

#### **Module 7: Pointers**

- Declaration of a Pointer
- Initializing Pointers
- Pointer Arithmetic
- Pointers and Arrays
- Arrays of Pointers
- Pointers and Strings
- Pointers and Functions
- Pointers to Pointers
- Dynamic Memory Management

#### **Module 8: Class and Object**

- Declaration of a Class
- Defining the Member Functions
- Creating the Objects, Class & Arrays
- Objects and Functions
- Friend Functions
- Pointers and Objects

#### **Module 9: Constructor and Destructors**

- Structure of a Constructor
- Types of Constructors
- Destructors

#### **Module 10: Inheritance**

- Structure of Inheritance
- Importance of Inheritance
- Types of Inheritance
- Constructor Invocation in Inheritance
- Destructor under Inheritance

#### **Module 11: Polymorphism**

- Types of Polymorphism
- Compile-Time Polymorphism
- Run-Time Polymorphism
- Virtual Destructor

#### **Module 12: Template and Exception Handling**

- Declaration of a Function Template
- Exception Handling
- Try, Catch and Throw
- Exception Generated by the Function
- Multiple catch Blocks
- Single catch Block for All Exceptions

#### **Module 13: File Organization**

- Stream
- Basic Operations with Files
- Binary Files
- Random Access Files
- Error Handling in Files
- File Pointers and Random Access

#### **Module 14: Preprocessor Directives and I/O**

- C++ Stream
- Preprocessor Directives
- Header Files
- Manipulators
- Unformatted I/O Functions
- Character Testing and Conversion Functions
- String Manipulation Function

## Student's Testimonial

**C#.Net Programming Course-**"C#.Net Training from G-TEC gives me the **full picture of this programming in short period. Both theory and practical works are well learned** though I need more practical practice."

**Leica Instruments (S) Pte Ltd, R & D.**

**C programming-**"The institution is **well organized and show good response. C advance** course covered all the relevant topics well."

**College Student, Singapore**

**C Programming Course-**"It is interesting for everyone to join the class .**Good environment for learning.**"

**Wong Ngit Min ,Logiccode Pte Ltd,Technical Support Engineer, Singapore**

**Java/J2EE Programming Course-** "This is the **best institution I found in Singapore.** Because here the trainer as well as training was good. The **trainers are very good** because if we have any doubts they are giving clarification through mail even after the course completed (Java/J2EE)".

**Comdo 2000 Pte Ltd, Software Engineer**

**Java/J2EE Programming Course-**"The Java/J2ee course material was well presented and very helpful for my work. I really got a great amount out of it. The one to one **training was excellent. It met all my expectations.** I can even try my hand at getting a SCJP cert now. Thanks to GTEC! "

**Sylvia Lawrence , IBM , IT Professional.**

**C#.net Programming Course-**"G-TEC provides a **good trainer** qualified. It was a **good learning experience** in G-TEC for C#.net".

**Emerson Process Management, Software Test Engineer.**

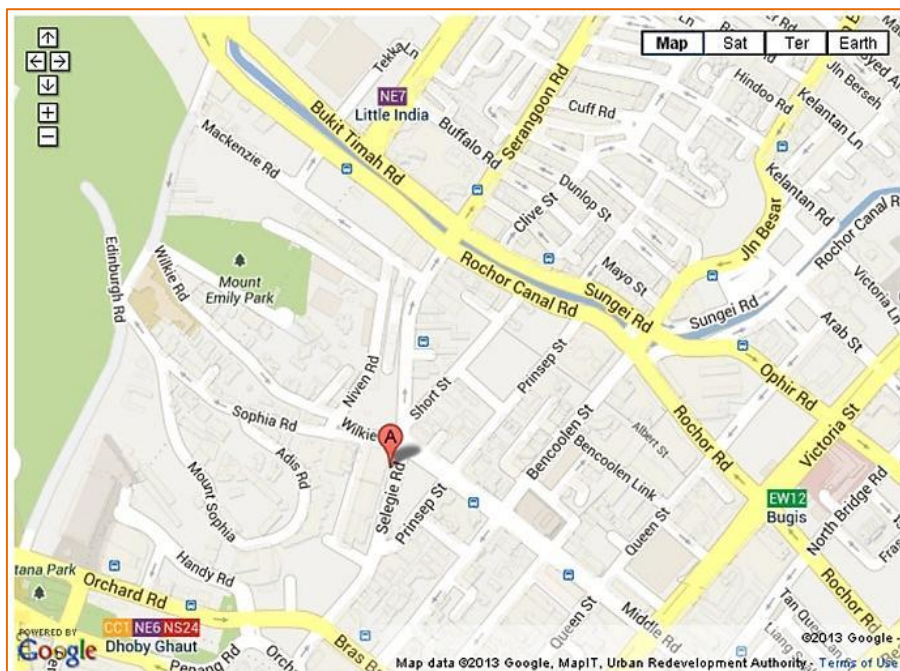
### Our Clients

Singapore Airlines, Bosch, Ministry of Home Affairs, Seagate, Land Transport Authority, NETS , Inland Revenue Authority of Singapore, Tiger Airways, DSO Laboratories, DHL, Changi Airport Group, DB Schenker, National University Hospital,Gemalto, Thales, Housing Development Board,Philips ,Micron, Surbana International Consultants Pte. Ltd., Singapore Polytechnic, ING Bank, Nanyang Polytechnic, Nanyang Technological University, Genetic Technologies Solutions, Singapore Chemical Industry Council (SCIC), State Bank of India , ST Engineering, Emerson Process Management, Keppel FELS , ST

## Company Profile

<p><b>What We do :</b></p>	<p>G-TEC Computer Education Centre is an Information Technology company in the field of Software Training, Technology Resourcing and Knowledge Consulting. We provide Corporate Training, Project Training, and Customized Training, One to One trainings for professionals, individuals and students.</p>
<p><b>Who are our Customers :</b></p>	<p>We have special teaching methodologies to train people in different categories ranging from corporate clients to school level students. Over 900000 students are certified by G-TEC all over the world. We have the privilege of working with some of the most well-known companies in the world.</p>
<p><b>Where we are :</b></p>	<p>G-TEC Computer Education Centre is the largest computer education networks with more than 510 centers all over the world and corporate office in Singapore. We are operating in Mexico, Qatar, India, Dubai, Singapore, Kuwait, Srilanka and Iran.</p>
<p><b>Our Goal and Focus :</b></p>	<p>Our aim is to make IT education affordable to all sections of society through various projects associating with government's quasigovernment public and private company to reach each and every corner. Our ultimate goal is to achieve cent percentage computer literacy. We are committed to provide 100% quality training to all; our focus is to provide Quality Education World Wide.</p>

## Our Location



1 Sophia Road, #02-03, Peace Centre, Singapore 228149.

Phone: 63360244, 9650 3505, Email: [Info.sg@gteceducation.com](mailto:Info.sg@gteceducation.com)

Registered with Committee for Private Education (CPE) is part of SkillsFuture Singapore (SSG)