

# C & C++ LANGUAGE

Get the skills to get ahead, stay relevant and earn more

### Book your seat now







## **About INCAPP**

INCAPP Coding Institute, established in 2011, was founded with the goal of addressing the global tech skills shortage. Our commitment lies in offering high-quality training programs to students,

professionals, and organizations. We strive to empower individuals with coding skills, facilitating personal and professional growth, and assisting organizations in enhancing their workforce's productivity and effectiveness.

Our company boasts a team of seasoned instructors, experts in their fields. We employ the latest teaching methodologies and technologies to provide engaging and interactive training programs.





## Founders

We foster innovation and empower aspiring coders. As founders, we are excited to welcome you aboard. Whether you're new to coding or already experienced, our hands-on curriculum and expert instructors will guide you. Coding is more than just writing lines; it involves creativity and problem-solving. Embrace challenges and celebrate your successes, knowing that coding is a journey of continuous growth. Let's get started!

**RAHUL CHAUHAN** 

PRAVEEN CHAUHAN

**Oracle & Microsoft Certified** 

**Founders & Instructors** 



## How We Help You To Learn













Step

### **Expert Instructors**

Top-class instructors, experts in their fields, teach through practical training.

### Assignments

Understand all concepts through well-structured assignments.

### **Doubt Resolutions**

Dedicated assistance provided to clarify doubts, featuring two types of instructors: Class Instructor and Lab Instructor.

### Projects

Gain a comprehensive understanding of the technology through project work, guided by your instructor.





## Why INCAPP Coding Institute

Students deserve the finest learning environment. At INCAPP, we guarantee a superior learning experience and personalized support to ensure your success.



INCAPP The Coding Institute



## **Trainers at INCAPP**







## The world's leading tech companies and startups hire our students



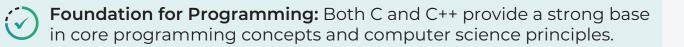


## What You Will Learn





## 5 Reasons To Learn C & C++



**System-Level Programming:** Ideal for system software, hardware interaction, and game development, offering fine control over system resources.



**Performance Efficiency:** Known for high performance, speed, and efficient resource management in critical applications.



**Basis for Other Languages:** Mastering C and C++ aids in learning languages like Java, Python, and C#, as they share similar concepts.



Widespread Industry Use: Both languages are crucial in sectors like embedded systems, operating systems, finance, and gaming.







## **Course Overview:**

C is a foundational programming language known for its efficiency in system programming, while C++ extends C with object-oriented features. Both are widely used in system software, embedded systems, game development, and other applications requiring close hardware interaction and high performance. C's syntax forms the basis of many languages, making it essential for computer science education.

## C & C++ Language ⓒ 🎯

### Introduction to C

- Programming Introduction
- Why learn the C programming language?
- History and Origin of C Programming
- Compilation and Execution Process
- Creating First C Program

#### Assignments

### Fundamentals

- Tokens
- Keywords
- Identifiers
- Operators
- Separators
- Literals
- Variable and Data Types
   Assignments

### Operators

- Assignment Operator
- Arithmetic Operator
- Shorthand Operator
- Increment Decrement Operator
- Relational Operator
- Logical Operator

- Conditional Operator
- Bitwise Operator
- Getting Input from Keyboard

#### Assignments

#### Introduction to C++

- Why learn the C++ programming language?
- History and Origin of C++ Programming
- Compilation and Execution Process
- Creating First C++ Program
- Getting Input from Keyboard
- Finding similarities and difference between C and C++ Program

#### Assignments

### **Decision** Making

- if statement
- if-else statement
- else-if statement
- nested if-else statement
- switch statement

#### Assignments



### **Loop Controls**

- for loop
- while loop
- do-while loop
- break and continue keyword
  - Nested loop Assignments

#### **Functions**

- Introduction to functions
- Types of functions
- Local and global variables
- Scope Resolution Operator
- Inline Function
- Recursion
- Recursive function
- Working with header files

#### Assignments

#### Type Casting

- Implicit Type Casting
- Explicit Type Casting

#### Assignments

#### **Storage Classes**

- Understanding storage classes
- Types of storage classes
- Automatic
- Register
- Static
  - External

#### Assignments

#### Arrays

- Introduction to array
- One Dimensional Array
- Accessing array using loop
- Getting input from keyboard in arrays

- Array with function
- Multi Dimensional array
  Assignments

### Strings

- Introduction to String
- Creating String using Character Array
- Getting String from Keyboard
- String Manipulation(String Handling)
- Predefine functions for String
- Arrays of String

#### Assignments

#### **User-Defined Data Types**

- Introduction to User-defined data types
- Understanding Structure
- Getting input for structure form
   Keyboard
- Operations on structure
- Arrays of Structure
- Nested structure
- Structure with function
- Understanding Union and Enumeration

#### Assignments

#### Pointers

- Understanding Pointer
- Declaring Pointer
- Initializing Pointer
- Accessing Variable using Pointer
- Call by Value
- Call by Reference
- Manipulating Array with Pointer
- Understanding Array with Pointer
- Understanding String with Pointer
- Working of String using PointerArrays of Pointers
  - Assignments



#### **Dynamic Memory Allocation**

- Understanding DMA(Dynamic Memory Allocation)
- Allocating memory at runtime
- new operator
- delete operator

#### Assignments

#### Preprocessors

- Understanding Preprocessor
- File Inclusion
- #include
- Macro Substitution
- #define
- Conditional Compilation
- #if
- #endif
- #ifdef
- #else
- #elif
- #ifndef
- · Miscellaneous Directives

#### Assignments

#### **Object-Oriented Programming**

- Understanding Object Oriented Programming(OOP)
- Who created OOP's concepts and why?
- Learn OOP's concepts in real world
- Defining your own class
- Creating object of a class
- Understanding Encapsulation
   in class
- Public and private access specifiers
   Assignments

#### **Instance and Static Members**

- Understanding Instance members
- Instance variable

- Instance member function
- Understanding Static members
- Static variable
- Static member function

#### Assignments

#### **Constructors and Destructor**

- Non-Parameterized Constructor
- Parameterized Constructor
- Copy Constructor
- Constructor Overloading
- Constructor with default arguments
- Constructor Chaining
- Understanding Destructor

#### Assignments

#### Inheritance

- Understanding Inheritance
- Derived (child) and Base (parent) classes
- Constructor in Inheritance
- Types of Inheritance

#### Assignments

#### Polymorphism

- Understanding Polymorphism
- Compile-time Polymorphism
- Runtime Polymorphism
- Virtual Functions

#### Assignments

#### Overloading

- Function Overloading
- Operator Overloading
- Unary Operator Overloading
- Binary Operator Overloading
- Friend Function

#### Assignments



### Abstraction

- Abstract Class
- Pure Virtual Function
   Assignments

#### **String Class**

- Creating String using String class
- Exploring String class members
- String manipulations(handling)
- Comparing Strings
- Accessing characters from String

#### Assignments

#### **Exception Handling**

- Understanding Exception
- Using try and catch block
- Try with multiple catch
- Rethrowing Exception
- Specifying Exceptions

#### Assignments

### File I/O

- File Stream
- Opening a file
- Reading from a file
- Writing to a file
- Closing a file
- Error handling during file handing Assignments

#### Templates

- Understanding Templates
- Function Templates
- Template function overloading
- Class Template

Assignments

Project Work





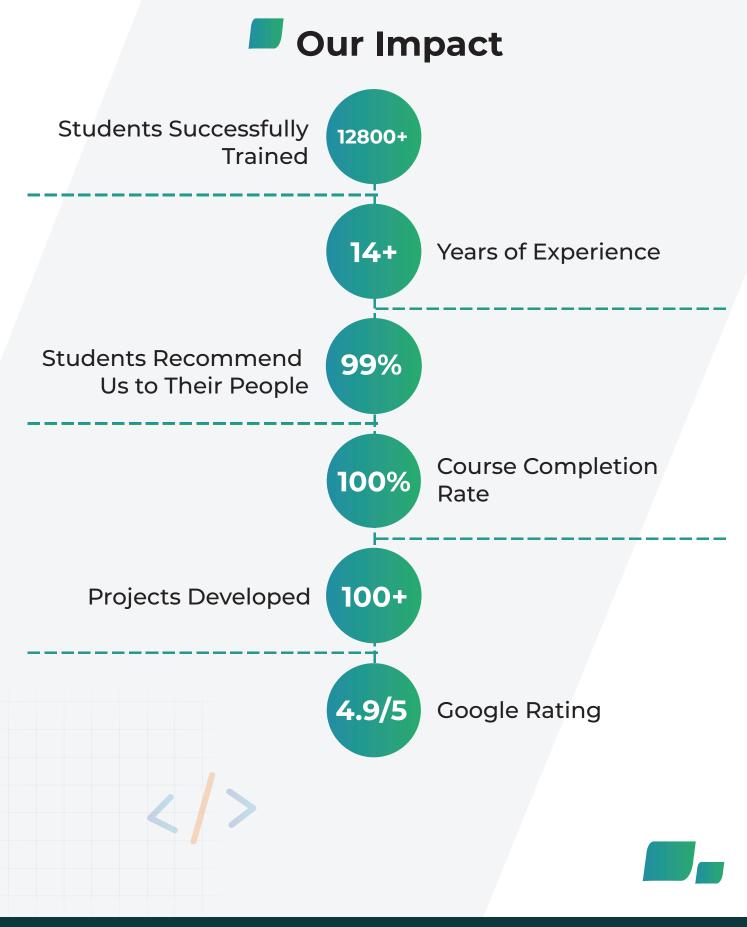
## Certificates



Upon completion of Course/Program, you will receive certificate from Incapp. This certificate validates your skills as an expert in the technology.

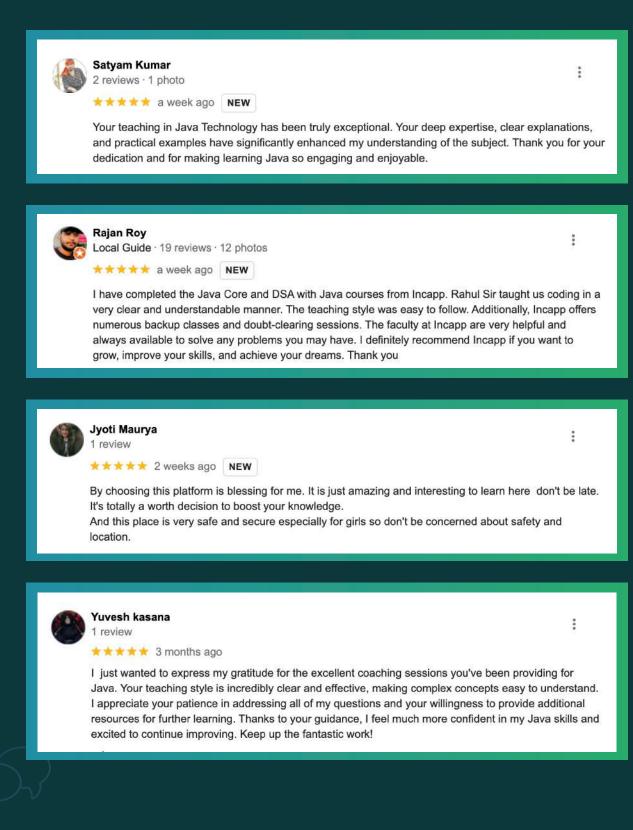








## What our students say about us





## What our students say about us



Anoop Shankar 1 review

#### ★ ★ ★ ★ ★ 2 months ago

Being the student of INCAPP is the best start to be the best in your field. Rahul Sir himself is mentoring many of us so that we as a developer will lead the IT sector. Here in INCAPP each one of you will be nurtured for the better future.



bulbul Dwivedi 2 reviews

★★★★★ 3 months ago

Incapp excellent communication skills with students A great review of python course essentials for programming in Incapp & a better understanding of coding, testing & applying style guidelines as per thoroughly given by instructor Mr. Praveen Chauhan



#### Tanu Kumari 2 reviews

\*\*\*\*\* 11 months ago

The coaching provided by Incapp for Web designing was exceptional. The coach's expertise in Java was evident throughout the coaching sessions. The coaching style was effective in breaking down complex concepts into easily understandable parts. The coach provided clear explanations and examples, making it easier to grasp. Overall, I am highly satisfied with the coaching provided by Incapp for Web designing.

Aditya Kaushik 1 review \*\*\*\*\* a week ago NEW

1

I did Core Java and data. Structure and algorithm. Algorithm In Incapp. by "Rahul chauhan "Sir It has really helped me understand.. the Care Concept in my Course and I fell more Confident in what I am doing Thanks Rahul chauhan

& many more

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