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ADYAPAN

# Adyapan School

## C++ with DSA



Duration - 3 months

Industry  
Certification



Skill India Certified

250+  
Partner Companies

# Automate. Analyze. Achieve with C++

From code to creation - become industry-ready.

This immersive C++ Programming program takes you beyond foundational syntax into real-world software development. Learn object-oriented programming, data structures, memory management, and STL (Standard Template Library) through hands-on projects and guided problem-solving. With a strong focus on performance optimization and industry-relevant practices, you'll graduate with the ability to build efficient applications, write robust code, and tackle complex system-level challenges with confidence.

8

MODULES

30+

PROGRAM OFFERINGS

20,000+

STUDENTS

250+ PARTNERED COMPANIES



ABOUT ADYAPAN SCHOOLS

## Where education meets real-world impact

Not just a course - a platform to launch  
your career.

Adyapan Schools was built with a single conviction:  
learning works best when it happens in the real world.  
We partner with top companies, mentors, and industry  
platforms to ensure every student graduates with a  
portfolio of work that speaks louder than a certificate.

Our programs combine rigorous coursework with live  
client projects, giving you the skills and proof-of-work  
that employers actually want.

### MISSION

To equip ambitious learners with  
practitioner-level digital  
marketing skills through mentor-  
led, project-based education that  
bridges the gap between learning  
and earning.



### VISION

To be India's most trusted  
launchpad for the next generation  
of marketing leaders - defined  
not by degrees but by the real  
work.



## Everything you need to grow fast

### PROGRAM HIGHLIGHTS

#### Live Industry Projects

Work on campaigns for real brands alongside your coursework. Build portfolio projects that prove your expertise to employers.

#### 1-on-1 Mentorship

Dedicated mentors from Google, Microsoft, Mastercard and more. Get personalized guidance and industry connections.



#### AI-Powered Marketing

Learn cutting-edge AI tools alongside evergreen fundamentals. Stay ahead of the curve in a rapidly evolving landscape.



#### Dual Certification

Earn both a Course Completion and Internship Certificate – accredited by Skill India Digital Hub and NSDC.



#### Internship Guarantee

Graduate with an internship completion certificate from a live brand project. Concrete, resume-ready proof of work.



#### Industry Network

Join a network of alumni at Amazon, Google, Adobe, Microsoft. Access exclusive hiring events and referral opportunities.

## CURRICULUM

# 8 weeks. 8 modules. Infinite impact.

### WEEK 1

#### C++ Fundamentals

- Discussion of Curriculum
- IDE setup: VS Code / CodeBlocks
- Program structure, headers, namespaces
- Variables, data types, cin/cout
- Operators & conditionals (if, switch)
- Loops (for, while, do-while)



### WEEK 2

#### Core Programming Concepts

- Arrays & strings
- Pointers - stack vs heap
- Functions - pass by value vs reference
- Recursion & problem solving
- File handling (fstream), exception basics



### WEEK 3

#### Object-Oriented Programming (OOP)

- Classes, objects, constructors, destructors
- Encapsulation & abstraction
- Inheritance (single, multiple, multilevel)
- Polymorphism & virtual functions
- Modular programming & header files



## 8 weeks. 8 modules. Infinite impact.

### WEEK 4

#### STL & Algorithm Complexity

- Vectors, lists, deque, maps, sets
- Stacks, queues, priority queues
- Iterators, `sort()`, `find()`
- Time & space complexity (Big-O basics)
- Recursion in algorithm design



### WEEK 5

#### Algorithms Deep-Dive

- Searching (linear, binary)
- Sorting (bubble, merge, quick, heap)
- Greedy algorithms
- Dynamic programming intro
- Divide & conquer patterns



### WEEK 6

#### Linear Data Structures

- Singly, doubly & circular linked lists
- Stacks (array & linked-list impl)
- Queues & deque from scratch
- Tree basics: binary tree intro
- Tree traversal: inorder, preorder, postorder



# Adyapan School

CURRICULUM

## 8 weeks. 8 modules. Infinite impact.

### WEEK 7

#### Non-Linear Data Structures

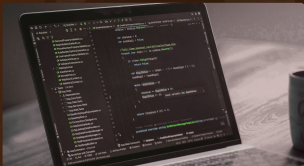
- Heaps & priority queues (impl.)
- Hash tables & hash maps
- Graphs (adjacency list/matrix)
- Graph traversal (BFS & DFS)
- Sets & balanced BSTs



### WEEK 8

#### System-Level & Final Project

- Memory mgmt: new, delete, smart pointers
- Multithreading basics O
- API integration via libcurl
- Performance optimization & debugging
- Full C++ application: design to deploy



WHO THIS IS FOR

## This course is perfect for

Students & Career Switchers

Aspiring Software Developers

Non-Tech Learners Entering IT

Tech Entrepreneurs &  
Freelancers

Analysts & Consultants

Automation & Scripting  
Learners

### CERTIFICATIONS



### ALUMNI NETWORK

Our alumni work at world-class companies

Amazon

Adobe

Google

Autodesk

Microsoft

Deloitte

Your career switch is one click away.

Ready to begin? Apply at [adyapanschool.com](https://adyapanschool.com) or email us at [support@adyapan.com](mailto:support@adyapan.com)

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