

GRRAS Solutions Training Institute

■ Professional IT Training Institute

C / C++ & Data Structures - Detailed Syllabus

Prepared for: Test Student

Date: August 30, 2025

Document ID: SYL-C-CPP-DSA-20250830

Course Information

Duration: 3 months

Fees: ■15,000 (EMI Available)

Level: Beginner to Intermediate

Eligibility: 12th Pass/Graduate; basic computer knowledge preferred but not mandatory.

Course Overview

Focused track covering C fundamentals, OOP with C++, STL, problem-solving patterns, and complexity analysis with hands-on coding. This comprehensive course provides a structured approach to mastering programming fundamentals through C and C++, while building strong problem-solving skills with Data Structures and Algorithms. Perfect for students preparing for technical interviews or looking to strengthen their programming foundation. The curriculum is designed to take you from basic C programming concepts to advanced C++ features and algorithmic thinking, ensuring you develop both theoretical knowledge and practical coding skills.

Course Highlights

- ✓ Structured roadmap for interviews
- ✓ Daily coding practice & contests
- ✓ Time & space complexity mastery
- ✓ Patterns: two-pointer, sliding window, DP, graphs
- ✓ Industry-standard coding practices
- ✓ Problem-solving methodology
- ✓ Hands-on project work
- ✓ Competitive programming preparation

Tools & Technologies Covered

- C Programming
- C++ Programming
- GCC/Clang Compiler
- STL (Standard Template Library)
- Git/GitHub
- VS Code
- Online Judges
- Data Structures
- Algorithms

What You'll Learn

- Write efficient C/C++ programs using OOP & STL
- Analyze algorithm complexity and optimize solutions
- Implement core DSA (arrays, strings, stacks/queues, linked lists, trees, graphs, heaps)
- Solve standard interview problems end-to-end
- Apply design patterns and best practices
- Debug and optimize code effectively

Career Opportunities

- Software Engineer
- C++ Developer
- Competitive Programmer
- Systems Programmer
- Backend Developer
- Technical Lead

Certificate Information

Certificate of completion with placement guidance and interview preparation support.

Schedule & Fees

For detailed schedule, duration, and fee structure, please contact our admissions team.

Contact Information

GRRAS Solutions Training Institute

A-81, Singh Bhoomi Khatipura Rd, behind Marudhar Hospital, Jaipur, Rajasthan 302012

Phone: 090019 91227