

# C Programming & Data Structures

## Synopsis & Objective of Course

A complete training course which is intended to teach C as a programming language in general, and the usage of data structures in special. Initially starting from elementary C, the trainee understands programming features of C and then learns handling of data structures.

Arrays, Functions, Pointers, Preprocessor, File Handling, Queues, Lists, Graphs, Searching, Sorting and all the aspects are covered exhaustively in this carefully designed course.

## Target Audience

Programmers and developers who wish to gain a solid understanding of the use of C as a programming language & master the data structures.

## Prerequisites

Attendees should have a basic knowledge of programming and computers.

Previous knowledge of the C language is helpful but not essential.

## Delivery

The training will be instructor led, with each section of the material being covered by the trainer and followed by hands-on practical exercises. Programming will be using GNU C compiler, however trainees can request for any other compiler too. Certain development projects will be given as assignments (under complete guidance) to master a trainee in implementation oriented programming.

**Duration** : 4 days

## Course Contents

| Day   | Topic                  | Sub topics   |
|-------|------------------------|--|
| Day 1 | <b>Basics of C</b>     | What is a Language?<br>Styles of programming & Introduction to C<br>Data types & Modifiers<br>Operators, Variables & Macros<br>Concept of functions & parts of a program<br>printf – scanf |
|       | <b>Data memory map</b> | Global & Local variables<br>Storage Classes<br>Stack & heap  |
|       | <b>Flow control</b>    | Decision Control – <i>if else, goto</i><br>Loop Control – <i>while, do while</i><br>Loop Control – <i>for, continue, break,</i><br>Case Control – <i>switch</i>                            |
|       | <b>Pointers</b>        | Introduction to pointers<br>Size & dereferencing of pointer  |



**Trainers' Profile**

Corporate Trainer(s) with more than 6 years of experience in embedded development & corporate training in CMM level5 companies.

**Scheduled & On-site Training**

Apart from in-house training programs, comprehensive training can be also provided as per the requirement & will be optimally customized as per the client's needs.

*For training calendar, availability of seats & other details please mail us at [training@sigmasolutions.co.in](mailto:training@sigmasolutions.co.in)*