

Advanced C Programming

Synopsis & Objective of Course

This is an intensive training course in ANSI C programming which forms the base for most of the other programming languages. Trainees successfully completing this course will have a sound understanding of functions, arrays and pointers. They will also have a good appreciation of structures, file handling, multiple compilation etc.

Target Audience

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

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 : 3 days

Course Contents

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

Day 2	Arrays Functions Strings Run Time	Pointer Arithmetic Arrays – a form of pointers Multi Dimensional Arrays Passing values & references Function pointer Recursive Functions Character Arrays – Strings Array of pointers to String String Functions Command line arguments Dynamic memory allocation Void pointer
Day 3	User data Types Pre-Processor Compilation & Running of Code I/O handling	Structures Declaring & accessing Arrays, pointers & structures in Structure Structure arrays & Structure pointers Unions & Enums Features of C Preprocessor Macros & Arguments Conditional compilation Parts of a program – in detail Steps involved in compilation Source code, assembly & bin/hex file Parser & Linker File Handling in C Text v/s binary mode Formatted I/O Miscellaneous & Review

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