



Programming

★ About C Programming ★

C is a general-purpose, procedure-oriented and very old but still gold programming language. C plays a vital role in Embedded Systems Programming and Kernal Programming for Operating Systems. C Programming was invented in 1973 by Dennis Ritche but still ranks 2nd in TIOBE Index after Java on Rank 1. C is also considered as a good start for programming skills in many universities and training institutes.

★ Whom is this course for? ★

- ✓ Professionals seeking Job in IT Industry. This course helps to get clear idea about ample of programming concepts and makes you confident for Job Interviews.
- ✓ Students seeking any professional course & have C Programming as a part of their syllabus.
- ✓ Any student curious to gain practical knowledge on programming with Hands-on training.

★ Prerequisites ★

- ✓ Basic Computer Knowledge & Mathematics Knowledge is expected.
- ✓ No programming or any kind of professional course knowledge is expected.

★ Syllabus ★

1. Introduction to C Programming

 3 hrs

- 1.1 What is Programming?
- 1.2 History of C Programming
- 1.3 Applications of C Programming
- 1.4 Compilers for C Programming
- 1.5 Geany, TDM-GCC, Coding C Android App - Installation
- 1.6 Printing "Hello World" in C.
- 1.7 Writing Algorithm & Flowcharts.

2. Fundamentals of C Programming

 3 hrs

- 2.1 Character Set, Keywords, Identifiers,
- 2.2 Data Types, Variables & Constants
- 2.3 Operators in C
- 2.4 Format Specifiers

3. Branching Statements

 8 hrs

- 3.1 if ... elseif ... else statements
- 3.2 Nested if..else statments.
- 3.3 Menu-Driven Programs using Switch Case
- 3.4 Problems for Practice

4. Looping

 12 hrs

- 4.1 Types of Loops
- 4.2 while Loops, do...while Loop, for Loop
- 4.3 Nested Loops
- 4.4 continue, break, goto statement
- 4.5 Problems for Practice

5. Functions

 8 hrs

- 5.1 Introduction to Function
- 5.2 Function Prototyping, Defining a Function
- 5.3 Parameterized Function, Return Statements
- 5.4 Recursive Functions
- 5.5 Problems for Practice

6. Array

 8 hrs

- 6.1 Introduction to Array
- 6.2 Array Declaration, Definition, Accessing array elements
- 6.3 n-D Arrays
- 6.4 Problems for Practice

7. String

 3 hrs

- 7.1 Strings Storage, String Functions
- 7.2 String Array

8. Structure & Union

 4 hrs

- 8.1 **Structure:** Declaration, Initialization, Nested Structure, Operation on Structure, Structure Array.
- 8.2 **Union:** Definition, Operations on a union

9. Pointers

 4 hrs

- 9.1 What are pointers? Pointer Definition and Declaration
- 9.2 Pointer to Pointer
- 9.3 Passing Array to Function
- 9.4 Pointer Array

10. File Handling

 4 hrs

- 10.1 Types of Files
- 10.2 Opening a File
- 10.3 File Operations - Reading, Writing

11. More in C Programming

 12 hrs

- 11.1 Storage Classes
- 11.2 Header Files / Writing your own header File
- 11.3 Graphic Designing in C
- 11.4 C for Embedded Systems
- 11.5 C for Kernal Development

★ Final Examination ★

- **Syllabus:** All Modules
- **Marks:** 100 Marks
- **Minimum Passing Marks:** 60
- **Time Limit:** 3 Hours
- **Paper Pattern:** MCQ's + Problem Statements
- **Type of Exam:** Online

