SYLLABUS FOR C LANGUAGE DURATION : 60 HRS

OVERVIEW OF C

- History of C
- Importance of C
- Programming style
- Basic structure of C program

UNDERSTANDING MEMORY MAP

- Memory organization: DOS as Case study
- Program memory area at runtime
- Memory representation of data objects & function objects

CONSTANTS, VARIABLES & DATA TYPES

- Character set, C Tokens
- Keywords & Identifiers
- Data type & its memory representation
- Overflow & Underflow of data

OPERATORS & EXPRESSIONS

- 8 types of Operators
- Bitwise Operators explained
- Operator precedence
- Operator associativity
- Type conversion in expression

CONTROL STRUCTURES: BRANCHING

- Decision making with if statement
- If….else statement
- Nested if …..else statement
- Else ….if ladder

- Switch statement, GOTO statement
- The?: operator

CONTROL STRUCTURES: LOOPING

- The While statement
- Do statement
- For statement
- Jumps in loop

ARRAYS & STRINGS

- Benefits of an Array
- Types of arrays (1D , 2D , Multi-D)
- Limitations of an array
- Manipulating a String
- Arrays of Strings
- Comparison of Strings
- String handling functions

HANDLING POINTERS

- Understanding basics of Pointers
- Rules for Pointers
- Pointer declaration
- Accessing a variable through its Pointer
- Pointers and Arrays

FUNCTIONS

- Why Functions
- Types of Functions
- A Multi-functional program
- Return values & their types
- Nesting of Functions
- Recursion
- Arguments & return types

STRUCTURES & UNIONS

- Defining a structure

- Why a structure is used
- Structure initialization
- Structures within structures
- Unions & its properties
- Application of Union

FILE HANDLING IN C

- What is a File?
- File Structure
- Defining, Opening a file
- Input/ Output Operations on files

Project work is mandatory after the completion of the training program.