

PIXEL COMPUTER INSTITUTE, MEERUT

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Syllabus : C Language

Duration : 60 hrs (Each Session 1 hour)

Session 1

- Why You Should Learn Programming Language
- How You Should Learn Programming Language
- Different Types of Software
- Different Types of Programming Paradigms
- Introduction to C
- History of C
- Features of C
- Applications of C

Session 2-4

- Constants, Backslash character constants
- Identifiers, Keywords, printf function
- Compiler, Interpreter. Program execution phases,
- Linker, Loader and preprocessing
- Data Types, Format specifiers, scanf function

Session 5-8

- Dealing with all 45 operators. Precedence and order of evaluation, Arithmetic operators
- , Increment and decrement operators, Relational operators, Logical operators
- bitwise operators, assignment operators, conditional operator, sizeof operator, Other operators

Session 9-10

- If
- if-else
- else-if ladder
- switch-case
- Assignments

Session 11 - 15

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- While
- do-while
- for Loop
- Nested loop break ,continue , goto ,exit ,return
- Assignment

Session 16-20

- One dimensional arrays, Accessing element of 1D arrays,
- Declaration of 2D arrays.
- Assignments

Session 21-24

- Strings versus character arrays ,Initializing strings
- String handling functions
- Two-dimensional character arrays or array of string
- Assignments

Session 25-29

- Why is structure used, What is structure, Advantages of structures
- Storage of Structures in Memory
- Array of structures Arrays within structures
- Nested structure , Bit fields program
- What are unions? Structures versus unions
- Typedef
- What is enum

Session 30-32

- What is function?
- Types and category of function, actual and formal arguments , returntype
- Assignments

Session 33-34

- Types of storage class, Scoping rules ,Dealing with all storage classes,
- Assignments

Session 35-38

- Def of Pointer, Dereferencing Pointer Variables
- Pointer to Pointer, Pointer Arithmetic, Dereference and increment pointer
- pointer to const data, const pointer ,const pointer to const data, Void pointer or Generic

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Pointer ,Null pointer and wild pointer

- Pointer to a Function , call by value, call by address ,Function Returning value and Address
- Pointer to an array, Array of pointers
- passing whole 1d array to a function ,passing whole 2d array to a function,
- Pointer to structure, Self-referential structures Passing structure member to a function
- Pointer to string, passing string to function,
- passing string into function, array of pointer to string

Session 39

- What is command line arguments
- Assignments

Session 40- 45

- malloc(), calloc(), realloc(), free()
- Dynamic array
- memory leak and link , linked list,
- What is preprocessing ,Dealing with all preprocessor directives
- File management I/O functions ,Random Access Files
- Command line arguments

Session – 46 – 53

- Live Project