<u>Syllabus</u>

<u>Python:</u>

Introduction to Python – variables, expressions and statements, evaluation of expression, precedence, string operation.

Function, calling function, type conversion and coercion, composition of function, mathematical function, user-defined function, parameters and arguments.

String and Lists – string traversal and comparison with examples. List operations with example.

Files and exceptions – text files, directories introduction to classes and objects – attributes, instances.

<u>C and C++:</u>

Introduction to C Language: Preprocessor directives, header files, data types and qualifiers. Operators and expressions. Data input and output, control statements. Arrays and strings- example programs. Two dimensional arrays - matrix operations. Structure, union and enumerated data type.

Pointers: Array of pointers, structures and pointers. Example programs using pointers and structures.

Functions – function definition and function prototype. Function call by value and call by reference. Pointer to a function –. Recursive functions.

Sorting and Searching : Bubble sort, Selection sort, Linear Search and Binary search. Scope rules Storage classes. Bit-wise operations.

Data files – formatted, unformatted and text files. Command line arguments – examples.