Duration:

Prerequisite: Basic Computer Skills

Introduction to Programming

- Introduction to Computer Software
- Classification of Computer Software
- Generation of Programming Languages
- Flow Chart
- Algorithm

Decision Control and Looping Statement

- Conditional Branching Statements
- if Statement
- if–else Statement
- if–else–if Statement
- Switch Case
- while loop
- for Loop
- do-while Loop
- Nested Loops
- Break and Continue Statements
- goto Statement

Functions

- Function Declaration/Function Prototype
- Function Definition
- Function Call
- Return Statement
- Call by Value
- Call by Reference
- Scope of Variables
- Recursive Functions

Arrays

- Declaration of Arrays
- Accessing the Elements of an Array
- Calculating the Address of Array Elements
- Calculating the Length of an Array
- Traversing an Array
- Inserting an Element in an Array
- Deleting an Element from an Array
- Merging Two Arrays
- Sort an Array
- Searching for a Value in an Array
- Passing Arrays to functions
- Two-dimensional Arrays
- Multidimensional Arrays

Strings

- Reading Strings
- Writing Strings
- Functions Used to Read and Write Characters
- Operations on Strings
- Finding the Length of a String
- Converting Characters of a String into Upper Case
- Converting Characters of a String into Lower Case
- Concatenating Two Strings to Form a New String
- Appending a String to Another String
- Comparing Two Strings
- Reversing a String
- Extracting a Substring from Left
- Inserting a String in Another String
- Deleting a String from the Main String
- Replacing a Pattern with Another Pattern in a String
- Arrays of Strings

Structure, Union and Enumerated Data Types

- Structure Declaration
- Typedef Declarations
- Initialization of Structures
- Accessing the Members of a Structure
- Copying and Comparing Structures
- Nested Structures
- Arrays of Structures
- Structures and Functions
- Self-referential Structures
- Unions
- Arrays of Union Variables
- Unions Inside Structures
- Structures Inside Unions
- Enumerated Data Type
- Enumeration Type Conversion
- Assigning Values to Enumerated Variables

Storage Classes

- auto Storage Class
- register Storage Class
- extern Storage Class
- static Storage Class
- Comparison of Storage Classes

C Graphics

- Drawing concentric circles
- Graphics program moving car
- Creating a Rainbow using Graphics