

Sharnbasveshwar College of Science, Kalaburagi

Department of Electronics

Course outline for Certificate Course

Sl. No	Title of the course	Marks		Total	T/week	Pr/week
		Theory	Practical			
1	Fundamentals of C Programming	40	20	60	1	2

Sharnbasveshwar College of Science, Kalaburagi
Department of Electronics
Certificate Course in fundamentals of c programming

Duration 1 Hour / Week

UNIT-I: 02Hrs
C language preliminaries: Introduction, Characteristics of C, Applications of C, Character Set, C tokens, Keywords and Identifiers, Basic structure of C Program, Compiling and Executing a C Program.

UNIT-II: 02Hrs
Constants and Variables: Constants, Variables, Assigning Values to variables, Data Types – int, float, char, double, Backslash constants, Data type modifiers, declaring variables as constant and as volatile, Symbolic constants, Delimiters, Multiple Assignment Statement, Statement.

UNIT- III: 02Hrs
Managing Input and Output Operations: Input – Output functions, Formatted Input and Formatted output, Unformatted Input functions and Unformatted output functions, Example programs.

UNIT- IV: 02Hrs
Operators and expressions: C-Operators, Arithmetic Operators, Increment & Decrement Operators, Conditional Operators, Relational Operators, Logical Operators, Bitwise Operators, , Special Operators, Arithmetic, Evaluation of Expressions, Precedence of Arithmetic Operators . Example programs.

UNIT- V: 04Hrs
Control statements: Conditional Control Statements – if statement, if-else statement, Nested-if statement , switch statement , go to statement. Example programs.

UNIT- VI: 04Hrs
LOOP CONTROL STRUCTURES: While-statement, do-while statement, for-statement, Nested-for statement, Jumps in loops-break statement, continue statement. Example programs.

UNIT- VII:**04Hrs**

Arrays: Definition, Classification of arrays, One-dimensional array, Declaration of one dimensional array, Initialization of one-dimensional array, Two-dimensional array, Declaration of Two-dimensional array, Initialization of two-dimensional array, Multidimensional-array, Example programs.

REFERENCE BOOKS:

1. Computer Concepts and C Programming, P. B. Kotur, 12th Edition, Sept.,2007.
2. Programming in ANSI C, E. Balagurusamy, Tata McGraw-Hill-New Delhi, 3rd Edition, 2004.
3. The C Programming Language by Brian W. Kernighan / Dennis Ritchie

Practical's (Minimum of 8 experiments to be performed):

1. Write a C program to accept three numbers and compute their sum and average.
2. Write a C program to accept two numbers and find their difference, product and division.
3. Write a C program to accept the radius of a circle and compute the area and perimeter.
4. Write a C program to exchange the values of two variables.
5. Write a C program to compute logical OR and logical AND of two values of variables.
6. Write a C program to accept three integers and print the largest amongst them.
7. Write a C program to accept an integer number and reverse it. And also check whether it is palindrome or not.
8. Write a C program to find the sum of the first n integers.
9. Write a C program to find sum of individual digits.
10. Write a C program to compute the factorial of a given number.
11. Write a C program to accept an integer number and check the given number is prime number or not.
12. Write a C program to print Fibonacci series of a given N numbers.
13. Write a C program to accept two matrices of the same order and find the sum of the corresponding elements of these matrices and print the sum matrix.
14. Write a C program to find the product of two matrices and print the product matrix.