

DEPARTMENT OF INFORMATION TECHNOLOGY				CLASS: I B.Sc. Information Technology				
Sem.	Course Type	Course Code	Course Title	Credits	Contact Hours/week	CIA	Ext	Total
I	Major Core Practical-1	20U1FMP1	C Programming – Lab	2	3	40	60	100

Course Objectives:

1. To acquire knowledge on the basis of C programming and train them to develop user friendly application code using C.
2. To familiarize the concept of Decision making and Looping.
3. To understand and apply the concepts of Array its declaration and uses.
4. Be familiar with programming environment with C programming structure and to implement.
5. To learn the concept of file structure and pointers used in code development.

Unit-I: Overview of C

1. Write a C program to find the Simple Interest,
2. Write a C program to find the Compound Interest.
3. Write a C program to find the sum of N Natural Numbers using formula.

Unit-II: Managing I/O Operations

4. Write a C program to check the given number is odd or even.
5. Write a C program to find the biggest 3 distinct numbers.
6. Write a C program to check the given character is vowel or not.
7. Write a C program to check the given number is Prime or not.
8. Write a C program to find the sum of digits of a given number.

Unit-III: Arrays

9. Write a C program to arrange the given list of numbers.
10. Write a C program to arrange the given list of Strings.
11. Write a C program to check the given string is palindrome or not.
12. Write a C program to perform Matrix Addition.
13. Write a C program to perform Matrix Multiplication.

Unit-IV: User-defined functions and Structures

14. Write a C program to convert Binary to Decimal and vice-versa.
15. Write a C program to find the Factorial value using recursion.
16. Write a C program to find the reverse of a given string using recursion.
17. Write a C program to process the student mark list using structures.

Unit-V: Pointers and Files:

18. Write a C program to process Employee Records using Files.
19. Write a C program for case conversion of file content.
20. Write a C program to perform arithmetic operations using Pointers.

Web Resources

1. <https://www.tutorialspoint.com/cprogramming/>
2. <https://www.programiz.com/c-programming/>
3. <https://www.geeksforgeeks.org/c-language-set-1-introduction/>

Pedagogy

Projector, Demonstration and Practical Session.

Course Learning Outcomes:

On the successful completion of the course, students will be able to

CLO No.	Course Learning Outcomes	K - Level
CLO 1	Outline the logic using flowchart for a given problem and develop programs using conditional and looping statements.	Up To K3
CLO 2	Develop programs with implementation of arrays, functions and parameter passing techniques.	Up To K2
CLO 3	Develop programs with string handling functions	Up To K3
CLO 4	Construct programs with Structure and Union features.	Up To K3
CLO 5	Gain skills to write file programs and perform various operations on files.	Up To K3

Mapping of CLOs with POs:

CLOs/POs	PO1	PO2	PO3	PO4	PO5
CLO1	3	3	2	N/A	3
CLO2	3	2	N/A	N/A	2
CLO3	3	2	N/A	N/A	3
CLO4	3	1	N/A	N/A	1
CLO5	3	3	N/A	N/A	3

3- Advanced Application; 2- Intermediate Level; 1- Basic Level; N/A- Not Applicable

Mapping of CLOs with PSOs:

COs/PSOs	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CLO1	CO1	3	2	3	2	N/A
CLO2	CO2	3	2	3	1	1
CLO3	CO3	3	1	3	1	N/A
CLO4	CO4	3	2	3	2	N/A
CLO5	CO5	3	3	3	3	N/A

3- Advanced Application; 2- Intermediate Level; 1- Basic Level; N/A- Not Applicable