

Subject Code	Subject Name	Category	L	T	P	S	Credits	Inst. Hours	Marks		
									CIA	External	Total
23BCA1FC	Structured Programming in C	Found. Course	2	-	-	-	2	2	25	75	100
Course Objective											
CO1	To familiarize the students with the Programming basics and the fundamentals of C, Data types in C, Mathematical and logical operations.										
CO2	To understand the concept using if statements and loops										
CO3	This unit covers the concept of Arrays										
CO4	This unit covers the concept of Functions										
CO5	To understand the concept of implementing pointers.										
	Details								No. of Hours	Course Objectives	
UNIT I	Overview of C: Importance of C, sample C program, C program structure, executing C program. Constants, Variables, and Data Types: Character set, C tokens, key words and identifiers, constants, variables, data types, declaration of variables, Assigning values to variables-Assignment statement, declaring a variables constant, as volatile. Operators and Expression.								6	CO1	
UNIT II	Decision Making and Branching: Decision making with If, simple IF, IF ELSE, nested IF ELSE, ELSE IF ladder, switch, GO TO statement. Decision Making and Looping: While, Do-While, For, Jumps in loops.								6	CO2	
UNIT III	Arrays: Declaration and accessing of one & two-dimensional arrays, initializing two-dimensional arrays, multi-dimensional arrays.								6	CO3	
UNIT IV	Functions: The form of C functions, Return values and types, calling a function, categories of functions, Nested functions, Recursion, functions with arrays, call by value, call by reference, storage classes-character arrays and string functions								6	CO4	
UNIT V	Pointers: definition, declaring and initializing pointers, accessing a variable through address and through pointer, pointer expressions, pointer increments and scale factor, pointers and arrays, pointers and functions, pointers and structures.								6	CO5	
	Total								30		

	Course Outcome	Programme Outcome
CO	On completion of this course, students will	
1	Remember the program structure of C with its syntax and semantics	PO1, PO3, PO5
2	Understand the programming principles in C (data types, operators, branching and looping, arrays, functions, structures, pointers and files)	PO2, PO3, PO6, PO7
3	Apply the programming principles learnt in real-time problems	PO3, PO4, PO7
4	Analyze the various methods of solving a problem and choose the best method	PO4, PO5, PO6
5	Code, debug and test the programs with appropriate Test cases	PO7, PO8
Text Book		
1	E.Balagurusamy, Programming in ANSIC, Fifth Edition, Tata McGraw-Hill, 2010.	
Reference Books		
1.	Byron Gottfried, Schaum's Outline Programming with C, Fourth Edition, Tata McGraw-Hill, 2018.	
2.	Kernighan and Ritchie, The C Programming Language, Second Edition, Prentice Hall, 1998	
3.	Yashavant Kanetkar, Let Us C, Eighteenth Edition, BPB Publications, 2021	
Web Resources		
1.	https://codeforwin.org/	
2.	https://www.geeksforgeeks.org/c-programming-language/	
3.	http://en.cppreference.com/w/c	
4.	http://learn-c.org/	
5.	https://www.cprogramming.com/	

Mapping with Programme Outcomes:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	2	2	2	2	-
CO2	2	2	2	2	-	2
CO3	3	2	2	1	1	-
CO4	3	2	2	1	-	1
CO5	1	2	2	2	2	3
Weightage of course contributed to each PSO	7	10	10	18	15	6

S-Strong-3

M-Medium-2

L-Low-1