

Siruseri IT park, OMR, Chennai - 603103

LESSON PLAN								
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING								
Name of the Subject		PROGRAMMING IN C		Faculty		Mrs.N.ANGAYARKANNI		
Subject Code		CS3251		Year / Sem		I/II		
Acad Year		2022-2023		Batch		2022-2026		
Course Objective								
1. To understand the constructs of C Language.								
2. To develop C Programs using basic programming constructs								
3. To develop C programs using arrays and strings								
4. To develop modular applications in C using functions								
5. To develop applications in C using pointers and structures								
6. To do input/output and file handling in C								
Course Outcome								
Upon completion of the course, the students will be able to:								
1.Demonstrate knowledge on C Programming constructs								
2.Design and implement applications using arrays and strings.								
3.Develop and implement modular applications in C using functions and pointers.								
4.Develop applications in C using structures.								
5.Design applications using sequential and random access file processing.								
Sl. No.	Topic(s)	T / R* Book	Periods Required	Mode of Teaching (BB / PPT / NPTEL / MOOCs etc.)	Blooms Level (L6)	(L1- L5)	CO	PO
UNIT-I BASICS OF C PROGRAMMING								
1	Introduction to C & programming paradigms	T1	1	PPT	L1		CO1	PO1-PO3
2	Applications of C Language	T1	1	BB	L2		CO1	PO1-PO2
3	Structure of C program	T1	1	BB	L2		CO1	PO1-PO2
4	C programming: Data Types	T1	1	BB	L2		CO1	PO1
5	Constants - Enumeration Constants & Keywords	T1	1	BB	L3		CO1	PO1-PO4
6	Operators: Precedence and Associativity, Expressions	T1	1	BB	L3		CO1	PO1-PO3
7	I/O & Assignment statements	T1	1	PPT	L3		CO1	PO3
8	Decision making &	T1	1	BB	L3		CO1	PO3
9	Looping statements	T1	1	PPT	L3		CO1	PO1-PO3
10	Switch statement	T1	1	BB	L2		CO1	PO1-PO2
11	Pre-processor directives	T1	1	BB	L2		CO1	PO1-PO2
12	Compilation process	T1	1	PPT	L3		CO1	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any								
Evaluation method : Assignment								
UNIT II ARRAYS AND STRINGS								
13	Introduction to Arrays: Declaration, Initialization	T1	2	BB	L2		CO2	PO1-PO3
14	One dimensional array,	T1	1	PPT	L2		CO2	PO1-PO3
15	Example Program: Computing Mean, Median and Mode	T1	2	BB	L2		CO2	PO1-PO3
16	Two dimensional arrays	T1	1	BB	L2		CO2	PO1-PO3
17	Example Program: Matrix Operations (Addition, Scaling, Determinant and Transpose)	T1	2	BB	L2		CO2	PO1-PO3
18	String operations: length, compare, concatenate, copy	T1	1	BB	L2		CO2	PO1-PO3
19	Selection sort	T1	1	BB	L2		CO2	PO1-PO3
20	Linear Search	T1	1	BB	L2		CO2	PO1-PO3
21	Binary search	T1	1	BB	L2		CO2	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any								
Evaluation method : Assignment								
UNIT III FUNCTIONS AND POINTERS								
22	Modular programming							
23	Introduction to functions	T1	1	BB	L2		CO3	PO1-PO3
24	Function prototype, function definition, function call	T1	1	PPT	L2		CO3	PO1-PO3
25	function call	T1	1	PPT	L2		CO3	PO1-PO3
26	Built-in functions (string functions, math functions)	T1	1	BB	L2		CO3	PO1-PO3
27	Recursion	T1, R1	1	PPT	L2		CO3	PO1-PO3
28	Binary Search using recursive functions	T1,R1	1	BB	L2		CO3	PO1-PO3
29	Pointers – Pointer operators – Pointer arithmetic	T1,R1	1	BB	L2		CO3	PO1-PO3
30	Arrays and pointers – Array of pointers	T1	1	PPT	L3		CO3	PO1-PO3
31	Example Program: Swapping of two numbers	T1	1	BB	L3		CO3	PO1-PO3
32	Parameter passing: Pass by value, Pass by reference	T1	1	PPT	L2		CO3	PO1-PO3
33	Example Program: Swapping of two numbers and changing the value of a variable using pass by reference.	T1	1	PPT	L2		CO3	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any								
Evaluation method : Quiz								

UNIT IV		STRUCTURES												
34	Introduction to Structure	T1	1	PPT	L2	CO4	PO1-PO3							
35	Nested structures	T1	1	PPT	L2	CO4	PO1-PO3							
36	Pointer and Structures	T1	1	PPT	L2	CO4	PO1-PO3							
37	Array of structures	T1	1	PPT	L2	CO4	PO1-PO3							
38	Self referential structures	T1	1	PPT	L3	CO4	PO1-PO3							
39	Example Program using structures	T1	1	PPT	L3	CO4	PO1-PO4							
40	Example Program using pointers	T1	2	PPT	L3	CO4	PO1-PO4							
41	Dynamic memory allocation	T1	1	PPT	L3	CO4	PO1-PO4							
42	Singly linked list	T1	1	PPT	L3	CO4	PO1-PO3							
43	typedef – Union	T1	1	PPT	L3	CO4	PO1-PO3							
44	Storage classes and Visibility.	T1	1	PPT	L3	CO4	PO1-PO4							
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz/ Mini Projects / Model Developed/others Planned if any														
Evaluation method : Quiz														
UNIT V		FILE PROCESSING												
45	Files & Types of file processing	T1	2	BB	L2	CO5	PO1-PO3							
46	Sequential access, Random access	R1	2	BB	L2	CO5	PO1-PO3							
47	sequential access file	T1	1	BB	L2	CO5	PO1-PO3							
48	random access files	T1	1	BB	L2	CO5	PO1-PO3							
49	Example Program: Finding average of numbers stored in sequential access file	T1	1	BB	L2	CO5	PO1-PO3							
50	File I/O built in functions	T1	1	BB	L2	CO5	PO1-PO3							
51	Example Program: Transaction processing using random access files	R1	1	BB	L2	CO5	PO1-PO3							
52	Command line arguments	T1, R1	1	PPT	L4	CO5	PO1-PO4							
53	Sample Programs	T1,R1	2	PPT	L4	CO5	PO1-PO4							
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz/ Mini Projects / Model Developed/others Planned if any														
Evaluation method : Quiz														
Content Beyond the Syllabus Planned :Debugging with gdb														
1	Plan to give the assignment : 1.Sample Programs for every topic 2.Develop User Defined Funtions													
Text Books														
1	1. Reema Thareja, —Programming in C, Oxford University Press, Second Edition, 2016 2. Kernighan, B.W and Ritchie,D.M, —The C Programming language, Second Edition, Pearson Education, 2006													
Reference Books														
1	Paul Deitel and Harvey Deitel, —C How to ProgramI, Seventh edition, Pearson Publication													
3	Yashwant Kanetkar, Let us C, 17th Edition, BPB Publications, 2020.													
3	Pradip Dey, Manas Ghosh, —Fundamentals of Computing and Programming in C1, First Edition, Oxford University Press, 2013.													
4	Anita Goel and Ajay Mittal, —Computer Fundamentals and Programming in C1, DorlingKindersey (India) Pvt. Ltd., Pearson Education in South Asia, 2011.													
5	Byron S. Gottfried, "Schaum's Outline of Theory and Problems of Programming withC", McGraw-Hill Education, 1996.													
6	http://nptel.ac.in/													
Website / URL References														
1	https://www.geeksforgeeks.org/Cprogramming-tutorials													
Blooms Level														
Level 1 (L1) : Remembering		Lower Order Thinking		Level 4 (L4) : Analysing		Higher Order Thinking	Projects / Mini Projects							
Level 2 (L2) : Understanding				Level 5 (L5) : Evaluating										
Level 3 (L3) : Applying				Level 6 (L6) : Creating										
Mapping syllabus with Bloom's Taxonomy LOT and HOT														
Unit No	Unit Name				L1	L2	L3	L4	L5	L6	LOT	HOT	Total	
Unit 1	BASICS OF C PROGRAMMING				1	2	6	0	0	0	9	0	9	
Unit 2	ARRAYS AND STRINGS				0	7	2	0	0	0	9	0	9	
Unit 3	FUNCTIONS AND POINTERS				0	7	2	0	0	0	9	0	9	
Unit 4	STRUCTURES				0	4	5	0	0	0	9	0	9	
Unit 5	FILE PROCESSING				0	5	2	2	0	0	7	2	9	
Total					1	25	17	2	0	0	43	2	45	
Total Percentage					2.22	55.56	37.78	4.44	0.00	0.00	95.56	4.44	100	
CO PO Mapping														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	0	0	0	0	0	0	0	0	3	2
CO2	3	3	3	0	0	0	0	0	0	0	0	0	3	2
CO3	3	3	3	2	0	0	0	0	0	0	0	0	3	2
CO4	3	3	3	3	0	0	0	0	0	0	0	0	3	2
CO5	3	3	3	3	0	0	0	0	0	0	0	0	3	2
Avg	3	3	3	2	0	0	0	0	0	0	0	0	3	2
Justification for CO-PO mapping														
CO1	How to solve the Problems and identify solutions for that problems (Engg.Knowledge, Analysis,Design)													
CO2	Basic Programming Knowledge (Engg.Knowledge, Analysis)													
CO3	They Develop their own user defined funtions(Engg.Knowledge, Analysis,Design)													
CO4	How to sort Real time datas using sorting techniques (Engg.Knowledge, Analysis,Design)													
CO5	Create their own Modules (Engg.Knowledge, Analysis,Design)													
3		High level			2			Moderate level			1		Low level	
Name & Sign of Subject Expert :N.ANGAYARKANNI														
Head of the Department :CSE														