

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

COURSE PLAN (June - November 2026)

Department : Mathematics
Name/s of the Faculty : Dr. Amalore Arumica
Course Title : Programming in C with practical
Course Code : 25MC/ME/PC13
Shift : II

COURSE OUTCOMES (COs)

COs	Description	CL
CO1	recall fundamental concepts of C programming, including compilation, arithmetic operations, control structures, arrays, pointers, and file handling.	K1
CO2	explain the fundamental principles of C programming, such as program structure, the use of operators, control flow mechanisms, data types, and functions.	K2
CO3	apply C programming concepts to write programs that implement arithmetic operations, control structures, loops, and functions effectively.	K3
CO4	analyze C programs to identify errors and inefficiencies, employing debugging techniques and tools like GDB to enhance program performance	K4
CO5	evaluate and compare various C programming solutions, assessing their efficiency and effectiveness across different programming tasks.	K5

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	1.1 Compiling and running a C program: Compiling a C program - program structure – statements - variables – printf – compiler error messages structure	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Questioning
July 2 – July 8, 2026 (Day Order 1- 6)	1	1.2 Arithmetic operators and expressions Types of operators – arithmetic operators – scanf – operator precedence – variable naming rules – keywords – tokens – identifiers – integer data types– overflow and underflow – unsigned integer types – float – formatting floating point number – double	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Quiz
July 9 – 16, 2026 (Day Order 1- 6)	2	2.1 Decision making: Relational operators - if statement – if-else statement – source code indentation – else –if blocks	K1-K5	4	CO1-5	Lecturing Learning by doing practical	III Component - 1 Quiz (unit -1 – section 1.1) [10 marks]
July 17 – 24, 2026 (Day Order 1- 6)	2	2.1 Decision making: logical operators – variable used as a condition – nested if - switch – fall through in switch -	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Questioning

		comments					
July 25 – 28, 2026 (Day Order 1- 3)	2	2.2 Loops: For – increment and decrement operators – break and continue – infinite loop	K1-K5	2	CO1-5	Lecturing Learning by doing practical	Slip Test
July 29 – Aug 3, 2026	C.A. Test - I [Units 1-1.2, 2]						
Aug 4 - 6, 2026 (Day Order 4 - 6)	2	2.2 Loops: short hand assignment operators - nested for loop - while – ternary operator- do while – data type char –character manipulation	K1-K5	2	CO1-5	Lecturing Learning by doing practical	Questioning
Aug 7 – 14, 2026 (Day Order 1- 6)	3	3.1 Arrays: Array declaration – array indexing - initialization – multidimensional array – 2D array initialization	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Slip test
Aug 17 - 24, 2026 (Day Order 1- 6)	3	3.1 Debugging: Syntax errors – logical errors – debugging techniques – GNU GDB – debugging a program – GDB commands: break, run, info, print, next, continue, quit	K1-K5	4	CO1-5	Lecturing Learning by doing practical	III Component- 2 Assignment and Test (Unit 3- 3.1 Arrays)

							[20 marks]
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	3	3.2 Functions: Function prototype – function definition – calling a function- parameters – local variables – return statement – variable scope - static variables – external variables	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Questioning
Sep 3 – 11, 2026 (Day Order 1- 6)	4	4.1 Pointers: Address-of operator – pointer – sizeof operator – dereferencing operator – passing address to a function- address arithmetic - initializing pointers –array subscript notation and pointers	K1-K5	4	CO1-5	Lecturing Learning by doing practical	Quiz
Sep 15-17, 2026 (Day Order 1 - 3)	4	4.2 Dynamic memory allocation: malloc – free- realloc – calloc	K1-K5	2	CO1-5	Lecturing Learning by doing practical	Slip Test
Sep 18 –23, 2026	C.A. Test – II I [Units 3, 4 : 4.1, 4.2]						
Sep 24 - 28, 2026 (Day 4 – 6)	4	4.3 Strings: char array – string – string initialization – string input and output	K1-K5	2	CO1-5	Lecturing Learning by doing practical	Questioning
Sep 29 – Oct 7, 2026	4, 5	4.3 Strings:	K1-K5	4	CO1-5	Lecturing	Quiz

(Day Order 1 - 6)		string functions: strlen, strcat, strcpy, strcmp 5.1 Structures: Structure declaration – initialization – accessing structure members				Learning by doing practical	
Oct 8 - 14, 2026 (Day Order 1 - 6)	5	5.1 Structures: passing structure to a function: pass by copy, pass by address – arrow operator – array of structures	K1-K5	4	CO1-5	Lecturing Learning by doing practical	III component - 3 Practical Test (unit 5: 5.1) [20 marks]
Oct 15 - 21, 2026 (Day Order 1- 4)	REVISION						