Programme: Degree Class: B.Sc.	Year: III	Semester: V

Subject: Mathematics		
Course Code:	**Course Title: Programming In C**	
Course Outcome	**CO1:**Writing algorithms for problem solving. **CO2:**Use the basic concepts of C programming in problem solving. **CO3:**Apply appropriate control statements and user defined functions. **CO4:**Identify and apply appropriate programming constructssuch as arrays, structures, unions etc. for problem solving.	

Unit No.	Course Content	Hours
I	Algorithms for problem solving, Structure of a C program, Pre-processor directives, Character set, Tokens in C, Keywords and identifiers, Constants, Variables, Data types, Arithmetic operators, Relational operators, Logical operators, Assignment operator, Conditional operator, Operator precedence and associativity, expressions, Declaration and initialization of variables, Reading and writing characters, Reading and writing strings, Data I/O, Qualifiers, Coercion, Manipulators, Comments, Library functions.	8
II	Branching and looping decisions, Decision making with IF, IF-ELSE, Nesting of IF-ELSE, ELSE-IF ladder, switch statement, 'for' loop, 'while' loop, 'do' loop, break, continue and goto statements.	8
III	Simple functions, Passing arguments to functions and returning values from functions, Recursion, Reference arguments, Storage classes, Scope and visibility of local and global variables	8
IV	Arrays Fundamentals, One-dimensional arrays, Two-dimensional arrays, Multi-dimensional arrays, Nesting of arrays, Passing arrays to functions, Strings, String handling functions, Array of strings.	8
V	Structures, Arrays and structures within structures, Array of structures, Passing structures to functions, Unions, Enumerations, typedef, Pointers, Pointers and arrays, Pointers and strings, Array of pointers, Reading from a file and writing in a file.	8

Suggested Readings:
1. Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language, Prentice Hall.
2. Byron S. Gottfried, Schaum's Outline of Theory and Problems of Programming with C, McGraw-Hill.
3. E. Balagurusamy, Programming in ANSI C, Tata McGraw-Hill.
4. YashwantKanitkar, Let us C, B.P.B. Pub.

Mapping of course outcomes with program outcomes & program specific outcomes

CO's No.	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	1	1	3	3	3	3	2	3	3
CO2	1	1	3	3	3	3	2	3	3
CO3	1	1	3	3	3	3	2	3	3
CO4	1	1	3	3	3	3	2	3	3