



Sub Committee for Curriculum Development

Course Name: Basics of C Programming

Course Code: T3266

(UG/PG): UG

Number of Credits: 4

Level: 2

Learning Objective(s):

An insight of procedural programming using C language where students would learn how to write a well structured, self-documenting, and maintainable code using C.

Pre-requisites:

Logic development and programming concepts

Pedagogy:

- Lectures
- Hands-on lab sessions

Course Outline:

Sr. No.	Topics	Hrs
1	Introduction Features of C Structure of C program- functions, statements, tokens, C compiler (gcc)-Preprocessing, compilation and linking	03
2	The Data Data types Constants – literal, symbolic and named , enumerations variables(Identifiers), type modifiers typedef	04
3	Standard library functions Header files Basic input-output - printf, scanf, conversion specifiers math functions	04
4	Operators and Expressions Unary,Binary,ternary Arithmetic,bitwise	04

	Operator Precedence, associativity lvalue and rvalue	
5	User defined functions Function arguments – passing values local and global variables return statement, return values	6
6	Structured Programming - Decision making : Relational operators If statement, if .. else statement Logical operators switch case statements. Ternary operator	06
7	Structured programming - iterations: loops - for , while , do-while nested loops recursion	06
	Advanced Pre-processor features function macros stringizing Conditional pre-processing and compilation	2
8	Pointers indirection and de-referencing constant pointers and pointer constants Functions – call by references	8
9	Arrays characteristics implementation – Pointers Single and multi-dimensional arrays Standard library functions – string handling, memory management passing arrays to functions, returning arrays from functions	9
10	Structured types structures – structure, union Pointers to the structures -functions, arrays	08
	Total	60

Book Recommended:

- Spirit of C by Moolish Cooper
- The C book by Denis Ritchie
- ANSI C by Kernigham and Ritchie

Research Papers/Articles recommended for reading:

Suggested Evaluation Methods:

- Assignments
- Hands on lab work
- Written examination

Parallel/Similar courses the existing curriculum:

S.No	Name of the course	Institute where it was offered

Name of Member	Harshad Gune				
Designation	Assoc. Professor				
Org. / Inst.	SICSR				
Signature					

Name of the Expert:

Signature:

Date: