

GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT

Department of Computer Science and Engineering

Academic Year: **2016-17**

Semester: **EVEN**

COURSE PLAN

Semester: **II**

Subject Code& Name: **15PCD23 & PROGRAMMING IN C AND DATA STRUCTURES**

Name of Subject Teacher: **N.S.SARADHA DEVI**

Name of Subject Expert (Reviewer): **SUPARNA K**

For the Period: **13-02-17 TO 20-05-17**

Details of Book to be referred:

Text Books	<ol style="list-style-type: none"> 1. Brian W. Kernighan and Dennis M. Ritchie: The C Programming Language, 2nd Edition, PHI, 2012. 2. Jacqueline Jones & Keith Harrow: Problem Solving with C, 1st Edition, Pearson 2011. 3. Manjunath, C Programming and Data Structures, Sanguine Technical Publications 4. E Balaguruswamy: Programming in ANSI C, 5th edition, TATA McGraw Hill Education, 2007.
Reference Books	<ol style="list-style-type: none"> 1. Vikas Gupta: Computer Concepts and C Programming, Dream tech Press 2013. 2. R S Bichkar, Programming with C, University Press, 2012. 3. V Rajaraman: Computer Programming in C, PHI, 2013.

Lecture NO	Topic Planned	Practical Applications & Brief objectives	Book referred with Pg No.	Planned Date	Executed Date	Deviation Reasons thereof	How Made Good / Reciprocate arrangement	Remarks by HOD
1.	Introduction to Subject			6/2/17				

2.	Algorithm	<p>Objective Introducing fundamentals of algorithms, C programming i/o statements, various types of operators.</p> <p>Application Embedded systems, Real time systems.</p> <p>Outcome Achieve Knowledge of design and development of C problem solving skills.</p>	T3: 1-9	8/2/17				
3.	Flow Chart		T3: 9-15	9/2/17				
4.	MODULE-I: Pseudo code Solution to Problem		T2: 5-6	13/2/17				
5.	Basic Concepts of C program		T1: 5-8	14/2/17				
6.	C Character set C Tokens		T1: 8-15	15/2/17				
7.	Basic data types Variables		T1: 35 - 37	16/2/17				
8.	Assignment and print statements		T1: 15-22	20/2/17				
9.	Operators		T1: 41 – 42,50-51	21/2/17				
10.	Types of operator(cont)		T1: 46-50	22/2/17				
11.	Precedence of operators Type Conversion		T1: 52-54	23/2/17				
12.	Programming Examples			27/2/17				
13.	Programming Examples			28/2/17				
14.	Revision			1/3/17				

15.	Module-II: Two way selection if statement if-else statement	<p>Objective This unit explains conditional statements including various loops and branching statements also few fundamental C programs.</p> <p>Application Decision making Algorithms, Iterative counting</p> <p>Outcome Understand the basic principles of Programming in C language</p>	T1:55-56	2/3/17				
16.	nested if-else statement		T1:57-58	3/3/17				
17.	cascaded if-else statement		T1:57-58	6/3/17				
18.	switch statement ternary operator		T1:58-59	7/3/17				
19.	Looping statements For loop		T1:62-63	8/3/17				
20.	While loop		T1:60-61	13/3/17				
21.	do-while loop		T1:63-64	14/3/17				
22.	break and continue statement		T1:64-65	15/3/17				
23.	Go to statement		T1:65-66	16/3/17				
24.	Exercise programs		T1:65-66	17/3/27				
25.	Revision		20/3/17					
26.	MODULE-III: Array Single dimensional array	<p>Objective How to use functions, arrays and strings with different cases in C programming</p>	T4:190-192	21/3/17				
27.	Programs using single dimensional array		T4:190-192	22/3/17				
28.	Two dimensional Array Programs		T4:193-204	23/2/17				

		<p>Application Text processing Data Storage and Retrieval</p> <p>Outcome Design and develop modular programming skills.</p>						
29.	Strings		T4:230-236	27/3/17				
30.	String Manipulation Functions <ul style="list-style-type: none"> • Strlen() • Strcpy() • Strcmp() 		T4:244-250	28/3/17				
31.	String Manipulation Functions <ul style="list-style-type: none"> • Strlwr() • Strupr() • Strcat() • Strrev() 		T4:244-250	30/3/17				
32.	String Manipulation Functions Array of strings		T4:244-250	31/3/17				
33.	Functions <ul style="list-style-type: none"> • What is function? • Components of function 		T4:262-266	3/4/17				
34.	Program using functions		T4:262-266	4/4/17				
35.	Categories of function		T4:274-284	5/4/17				
36.	Categories of function continued Actual parameters and formal parameters		T4:274-284	6/4/17				
37.	Parameter passing		T4:289-294	7/4/17				

38.	Recursion		T4:288-289	10/4/17					
39.	Revision			11/4/17					
40.	MODULE-IV: Structure		T4:317-322	12/4/17					
41.	Sample program using structures Array of structures		T4:327-329	13/4/17					
42.	Structure and functions	<p>Objective Structures introduced along with arrays, functions through programming examples. Also files concepts introduced</p> <p>Application Database Applications</p> <p>Outcome Effective utilization of memory using pointer technology</p>	T4:333-335	20/4/17					
43.	Typedefing a structure Structure within structure		T4:331-333	21/4/17					
44.	Files		T4:389-390	24/4/17					
45.	fopen() fclose()		T4:390-391	25/4/17					
46.	fscanf() fprintf()		T4:391-392	26/4/17					
47.	fgetc() fputc()		T4:392-398	27/4/17					
48.	fputs() fgets()		T4:392-398	28/4/17					
49.	Revision				2//5/17				

50.	MODULE-V: Data Structure	<p>Objective Pointers and preprocessors plays a vital role in C programming and data structures which are introduced in this unit</p> <p>Application Building System softwares</p> <p>Outcome Understands the basic concepts of pointers and data structures.</p>	T3: 548-550	3/5/17				
51.	Stack Stack operation		T3: 548-550	4/5/17				
52.	Queue Queue operation		T3: 553-562	5/5/17				
53.	Linked list What is linked list? Types of linked list		T3: 564-570	8/5/17				
54.	Operations of Linked list		T3: 564-570	9/5/17				
55.	Trees		T3: 579-580	10/5/17				
56.	Pointers		T4: 351-355	11/5/17				
57.	Preprocessor directives		T4: 444-450	12/5/17				
58.	Memory Allocation functions		T4: 411-416	18/5/17				
59.	Pointers and Arrays		T4: 364-367	19/5/17				
60.	Pointer and functions		T4: 370-373	22/5/17				
61.	Pointers to pointers		T4: 376-379	23/5/17				
62.	Revision			24/5/17				
63.	Revision			25/5/17				

64.	Revision	<i>Solving VTU Question papers</i>		26/5/17				
65.	Revision			29/5/17				
66.	Revision			30/5/17				
67.	Revision			31/5/17				
68.	Revision			1/6/17				

Prepared By: _____
 (Faculty)
 Date & Sign _____

Reviewed by: _____
 (Sub. expert)
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 (HOD)
 Date & Sign _____

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 (Principal/ Acad. Co)
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