Bhoj Reddy Engineering College for Women: Hyderabad

Department of Electrical and Electronics Engineering

Lesson plan of faculty member for the academic year 2018–19

Class: I B Tech Branch-Section: EEE Semester: I

Subject: Programming for Problem Solving Lectures per week: 4

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Introduction to Programming		
1	Components of a computer system	2 January 2019
2	Number systems	3 January 2019
3	Algorithms	7 January 2019
4	Flowchart/Pseudo code	8 January 2019
5	Program design and structured programming	9 January 2019
6	Introduction to C Programming Language	10 January 2019
7	Variables, data types	16 January 2019
8	Syntax and Logical Errors in compilation, object and executable code	17 January 2019
9	Operators, expressions and precedence, expression evaluation	21 January 2019
10	Storage classes (auto, extern, static and register), type conversion	22 January 2019
11	The main method and command line arguments	23 January 2019
12	Bitwise operations: Bitwise AND, OR, XOR and NOT operators	24 January 2019
13	Conditional Branching and Loops	28 January 2019
14	I/O: Simple input and output, Formatted I/O	29 January 2019
15	Introduction to stdin, stdout and stderr, Command line arguments	30 January 2019
UNIT – II: Arrays, Strings, Structures and Pointers		
16	One and two dimensional arrays	31 January 2019
17	Creating, accessing and manipulating elements of arrays	4 February 2019
18	Introduction to strings, handling strings as array of characters	5 February 2019
19	Basic string functions available in C (strlen, strcat, strcpy, strstr etc.)	6 February 2019
20	Arrays of strings	7 February 2019
21	Structures: Defining structures, initializing structures	11 February 2019
22	Unions, Array of structures	12 February 2019
23	Pointers: Idea of pointers, Defining pointers	13 February 2019
24	Pointers to Arrays and Structures, Use of Pointers in self-referential structures	14 February 2019
25	Usage of self referential structures in linked list, Enumeration data type	18 February 2019
UNIT – III: Preprocessor and File handling in C		
26	Commonly used Preprocessor commands- include, define, undef	19 February 2019
27	if, ifdef, ifndef	20 February 2019
28	Text and Binary files	21 February 2019
29	Creating, reading and writing text and binary files	25 February 2019
30	Revision	26 February 2019
31	Appending data to existing files,	6 March 2019
32	Writing and reading structures using binary files	7 March 2019
33	Random access using fseek, ftell and rewind functions	11 March 2019
UNIT – IV: Function and Dynamic Memory Allocation		
34	Functions: Designing structured programs	12 March 2019
35	Declaring a function, Signature of a function	13 March 2019
36	Parameters and return type of a function	14 March 2019
37	Passing parameters to functions	18 March 2019
38	Call by value, Passing arrays to functions	19 March 2019
39	Passing pointers to functions, idea of call by reference	20 March 2019
40	Some C standard functions and libraries	25 March 2019

41	Recursion: Simple programs-Finding Factorial, Fibonacci series	26 March 2019
42	Limitations of Recursive functions	27 March 2019
43	Dynamic memory allocation: Allocating and freeing memory	28 March 2019
44	Allocating memory for arrays of different data types	1 April 2019
UNIT – V: Introduction to Algorithms		
45	Algorithms for finding roots of a quadratic equations	2 April 2019
46	Finding minimum and maximum numbers of a given set	3 April 2019
47	Finding if a number is prime number	4 April 2019
48	Searching and sorting techniques introduction	8 April 2019
49	Basic searching in an array of elements- Linear search	9 April 2019
50	Binary search techniques	10 April 2019
51	Algorithm to sort array of elements –Bubble sort algorithm	11 April 2019
52	Insertion sort algorithm	15 April 2019
53	Selection sort algorithm	16 April 2019
54	Basic concept of order of complexity through the example programs	17 April 2019
55	Revision	18 April 2019
56	Revision	22 April 2019
57	Revision	23 April 2019

Text books:

1. Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill
2. B.A. Forouzan and R.F. Gilberg C Programming and Data Structures, Cengage Learning, (3rd Edition)

Name and signature of the faculty: Mrs. V Swarna Kamalam

Name and signature of Head of the Department: Mr. M Vinod