I B. Tech II Semester Computer Science and Engineering Section-D

Computer Programming (14CSU12T01) - Lesson Plan

No. of Weeks: 17 **No. of Hours: 85** **Hours for Lesson Plan: 70**

Unit	Topic	Hours	Concerned Lab Exercises
I [10+2]	Structure of C Program	1	1,2,3(a)
	C Tokens	4	
	Control Structures	5	
	Formative/Summative Assessment	2	N/A
II [14+3]	Introduction to Functions	4	3(b),5
	User-Defined Functions		
	Accessing a Function		
	Function Prototypes		
	Storage Classes		
	Defining an Array	6	4,10,11,12
	Processing an Array		
	One dimensional arrays		
	Two dimensional arrays		
	Searching: Linear and Binary Searching		
	Sorting: Bubble Sort		
	Insertion Sort, Selection Sort		
	Merge sort		
	Quick sort		
	Pointers: Fundamentals	4	
	Pointer Declarations		
	Pointers and one dimensional array		
	Dynamic memory allocation		
	Formative/Summative Assessment	3	N/A
III [9+3]	Strings: Declaring and Defining a string	3	6
	Initialization of Strings		
	Strings Library Functions		
	Structures: Defining and Processing a structure	3	7, 8
	Files: File Definition, Opening and Closing a data file	3	9
	Reading and writing a data file		
	Files I/O functions		
	Formative/Summative Assessment	3	N/A
IV [14+3]	C++ Programming: Objects, Class Definition, Class Members	6	
	Access Control		
	Constructors and Destructors		
	Parameter passing methods		
	Dynamic memory allocation and deallocation(new and delete)		
	Generic Programming- Function and class templates	4	10,11,12,13
	Inheritance basics, base and derived classes, inheritance types, base class access control	4	
	Formative/Summative Assessment	3	N/A
V [10+2]	Data Structures: Classification of Data Structures	2	N/A
	Stacks, Stacks Operations, Stack Implementation by using Arrays	4	13(a), 14
	Queues, Queues implementation by using arrays, Types of Queues	2	13(b), 13(c)
	Single Linked Lists, Operations	2	15
	Formative/Summative Assessment	2	N/A