Lesson Plan

Name of the Faculty : Ms. Ginni Chawla

Discipline : Computer Science & Engineering

Semester : 2nd

Subject : Introduction to Computer Programming

Lesson Plan duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture / Practical) per week (in hours): Lecture-03,Practicals-02

Week	Theory		Practical	
	Lecture Day	**Topic**	**Practical Day**	**Topic**
1st	1st	Overview of Computers: • Block diagram and its description	1st	• Write a program to find the sum of individual digits of a positive integer. • Write a program to generate the first n terms of the Fibonacci sequence.
	2nd	• Number systems		
	3rd	• Arithmetic of number systems		
2nd	4th	Computer Hardware: • Printers	2nd	• Write a program to generate all the prime numbers between 1 and n, where n is the input value given by the user. • Write a program to find the roots of a quadratic equation.
	5th	• Keyboard and Mouse		
	6th	• Storage Devices		
3rd	7th	Introduction to Programming language: • High Level Language • Assembly language • Machine Language	3rd	• Write a function to construct a pyramid of numbers. • Write a C functions to find both the largest and smallest number of an array of integers.
	8th	Introduction to • Compiler • Interpreter • Debugger		
	9th	Introduction to • Linker • Loader • Assembler		
4th	10th	Problem Analysis: • Problem solving techniques	4th	• Write a program for addition of Two Matrices
	11th	• Algorithms and Flowchart representation		
	12th	Overview of C: • Elements of C		

5th	13th	• Data types	5th	• Write a program for calculating transpose of a matrix.
	14th	• Storage classes in C		
	15th	• Operators: Arithmetic, relational, logical, bitwise, unary, assignment and conditional operators,		
6th	16th	• precedence & associativity of operators.	6th	• Write a program for Matrix multiplication by checking compatibility
	17th	Input/output: • Unformatted I/O function in C.		
	18th	• Formatted I/O function in C.		
7th	19th	Control statements: • if statement	7th	• Write a function that uses functions to perform the count the lines, words and characters in a given text.
	20th	• Switch statement		
	21st	Repetition: • for loop		
8th	22nd	• while loop	8th	• Write programs that use both recursive and non-recursive functions for the following a) To find the factorial of a given integer. b) To find the GCD (greatest common divisor) of two given integers.
	23rd	• do-while loop		
	24th	• break, continue, goto statements		
9th	25th	Arrays: • Definition • Types • Initialization	9th	• Write a program to explores the use of structures, union and other user defined variables
	26th	• processing an array		
	27th	• String handling		
10th	28th	Functions: • Definition • prototype	10th	• Write a program to implement call by reference
	29th	• parameters passing techniques		
	30th	• recursion		
11th	31st	• built-in functions	11th	• Write a program to print the element of array using pointers • Write a program to print the elements of a structure using pointers
	32nd	• passing arrays to functions		
	33rd	• returning arrays from functions.		
12th	34th	Pointers: • Declaration • operations on pointers	12th	• Write a program to read a string and write it in reverse order • Write a program to concatenate two strings
	35th	• pointers and arrays		

	36th	• dynamic memory allocation		
13th	37th	• pointers and functions	13th	• Write a program to check that the input string is a palindrome or not.
	38th	• pointers and strings.		
	39th	Structure & Union: • Definition • Processing		
14th	40th	• Structure and pointers	14th	• Write a program which copies one file to another.
	41st	• passing structures to functions		
	42nd	• use of union		
15th	43rd	Data files: • Opening and closing a file	15th	• Write a program to reverse the first n characters in a file.
	44th	• Input operations on files		
	45th	• Output operations on files		