

Lecture Plan – Introduction to Programming
2nd Semester (Even Semester Jan – May)
Academic Year 2016-17

ETCS – 108		L	T	C
Total No. of Lectures: 32		3	0	3
S. NO.	CONTENTS	NO. OF LECTURES		
MID TERM				
1.	Basic concepts of algorithm and flow charts with suitable examples, concepts of translators (compiler, interpreter and assembler) and their purpose, key terms associated with translators (loader, linker, scheduler, and dispatcher).	3		
2.	Introduction to programming languages, characteristics of C language, basic structure of a C program.	1		
3.	How to write program in C language, writing basic programs, overview of compilation / execution process, explanation of key terms associated with compilation / execution (errors, bugs , run time error, logical errors etc).	4		
4.	Programming using C: Preprocessor Directives, Header Files, Main Function and, Macro.	1		
5.	Formatted and unformatted I/O statements, Data Types including enumeration, Tokens (keywords, Identifiers, Variables, Constants etc.).	2		
6.	Operators: Relational, Logical, Arithmetic, Conditional, Bitwise etc, Evaluation of expressions, Precedence and Associativity of operators with examples.	1		
7.	Conditional Executing using IF, Else, Switch (Case), Goto, Break and Continue Statements.	2		
8.	Loops: Concept of Loops, For Loop, While Loop, Do – While and Nested For Loops, Comparison of Loops.	2		
9.	Storage Class: Auto, Register, Static and Extern.	3		
AFTER MID – TERM COURSE				

	Arrays: Declaring, initialising and accessing array elements using 2 – Dimensional and 3 –Dimensional Arrays, Matrix Computation by using Arrays.	
10.	Functions: Concepts of functions, declaring and using predefined functions, Parameter passing in functions (call by value and call by reference), Passing the array in function, Recursion.	3
11.	Pointers: Concept of pointers, Relationship between array and pointer, Passing array as argument, Array of pointers, Dynamic memory allocation using malloc(), use of free (), Pointer Arithmetic.	3
12.	Structure and Union, String and C string library.	2
13.	File handling in C using file pointers fopen(), fclose(), input and output using file pointers.	1
14.	Character input and output with files, String input and output functions.	2
15.	Formatted input / output functions, Block input / output functions.	1
16.	Sequential Vs Random Access Files, Positioning the File Pointer.	1