100908/CO200G PROGRAMMING IN C
Course Contents and Lecture Schedule

No	Topic	No. of Lectures
1	Module 1: Basics of Computer Hardware and Software (7 hours)	
1.1	Basics of Computer Architecture: Processor, Memory, Input& Output devices	2 hours
1.2	Application Software & System software: Compilers, interpreters, High level and low-level languages	2 hours
1.3	Introduction to structured approach to programming, Flow chart	1 hour
1.4	Algorithms, Pseudocode(bubble sort, linear search – algorithms and pseudocode)	2 hours
	Module 2: Program Basics (8 hours)	
2.1	Basic structure of C program: Character set, Tokens, Identifiers in C, Variables and Data Types , Constants, Console IO Operations, printf and scanf	2 hours
2.2	Operators and Expressions: Expressions and Arithmetic Operators, Relational and Logical Operators, Conditional operator, sizeof operator, Assignment operators and Bitwise Operators. Operators Precedence	2 hours
2.3	Control Flow Statements: If Statement, Switch Statement, Unconditional Branching using goto statement, While Loop, Do While Loop, For Loop, Break and Continue statements.(Simple programs covering control flow)	4 hours
3	Module 3: Arrays and strings: (7 hours)	
3.1	Arrays Declaration and Initialization, 1-Dimensional Array, 2Dimensional Array	2 hours
3.2	String processing: In built String handling functions(strlen, strcpy, strcat and strcmp, puts, gets)	2 hours

3.3	Linear search program, bubble sort program, simple programs covering arrays and strings	3 hours
4	Module 4: Working with functions (7 hours)	
4.1	Introduction to modular programming, writing functions, formal parameters, actual parameters	2 hours
4.2	Pass by Value, Recursion, Arrays as Function Parameters	2 hours
4.3	structure, union, Storage Classes, Scope and life time of variables, simple programs using functions	3 hours
5	Module 5: Pointers and Files (6 hours)	
5.1	Basics of Pointer: declaring pointers, accessing data though pointers, NULL pointer, array access using pointers, pass by reference effect	3 hours
5.2	File Operations: open, close, read, write, append	1 hours
5.3	Sequential access and random access to files: In built file handling functions (rewind() ,fseek(), ftell(), feof(), fread(), fwrite()), simple programs covering pointers and files.	2 hours