Course Title: **C Programming (4 Cr.)**
Course Code: **CACS151**
Year/Semester: **I/II**
Class Load: **8 Hrs. / Week (Theory: 4 Hrs, Tutorial: 1 Hr., Practical: 3 Hrs)**

Course Description

This course includes both theoretical as well as practical concept of programming. Practical skill of programming are provided using C language which includes basic concept of C, operators and expressions, basic input/output function, control structures, array & string, function, pointer, structure and union, file handling and graphics in C.

Course Objectives

The general objectives of this course are to provide fundamental concepts of programming language, programming technique and program development using C programming language.

Course Contents

Unit 1 Programming Language   10 Hrs.

Introduction to Programming Language, Types of Programming Language, Language Processor, Program Errors, Features of Good Program, Different Programming Paradigm, Software Development Model, Program Development Life Cycle, System Design Tools.

Unit 2 Programming Technique   5 Hrs.

Introduction to Programming Technique, Top down & Bottom up Approach, Cohesion and Coupling, Structured Programming, Deterministic and Non-deterministic Technique, Iterative and Recursive Logic, Modular Designing & Programming.

Unit 3 Basic Concept of C   5 Hrs.

Introduction, History, Features, Advantages and Disadvantages, Structure of C program, Compiling Process, C Preprocessor and Header Files, Library Function, Character Set, Comments, Tokens and its types, Data types, Escape Sequences, Preprocessors Directives.

Unit 4 Operators and Expressions   3 Hrs.

Arithmetic Operator, Relational Operator, Logical Operator, Assignment Operator, Increment/decrement Operator, Conditional Operator, Bitwise Operator, Comma Operator, Sizeof Operator, Operator Precedence and Associativity, Expressions and its Evaluation, Type Casting in Expression, Program Statement.