Course Title: Computer Programming
Course Code: COMP 102
Credit Hours: 3

Course Description:
This course introduces the fundamental concepts of procedural programming in C. Topics include data types, control structures, functions, arrays, structure and pointer. This course also focuses on the development of problem solving skills using programs.

Course Contents:

Unit 1: Introduction
History of C, Introduction to C, Importance of Program (C Program), Desired Program Characteristics

Unit 2: C Fundamentals
The C Character set, Identifier and Keywords, Data Type, Variables, Declaration, Constants (Sting, Numeric, Character Constant), Symbolic Constant

Unit 3: C Operators
Arithmetic Operators, Assignment Operators, Logical and Comparison Operations, Bitwise Operators, Unary Operator, Conditional Operators

Unity 4: Writing a Program in C (Data Input and Output)
Simple Program, Input Statement, Output Statement, Features of stdio.h,

Unit 5: Control Structure
Condition Statements: if Statement, if-else Statement, switch statement, Loop Statements: for loop, while loop, do-while loop, Break Control Statements: break, continue, go-to statement

Unit 6: Function
Defining Function, Use of function, Function Prototypes, Passing Argument to a Function, Recursive function

Unit 7: The Scope of Variable
Storage Class, Automatic Variable, Static Variable, External Variable

Unit 8: Array
Defining an Array, Processing an Array, Passing Array to Function, Multidimensional Array

Unit 9: Pointer
Pointer Declaration, Pointer Arithmetic, Operation on Pointers, Pointer and Array (Pointer and one dimension Array), Dynamic Memory Allocation

Unit 10: Program Structure
Declaration of Structure, Initialization of Structure, Array of Structure, Pointer to Structure

References:
1. Byron s. Gottfried, *Programming with C*, Mc Graw Hill.
2. K.R. Venugopal, Sudeep R. Prasad, *Programming with C*, Tata Mc Graw Hill