BC103 --- COMPUTER PROGRAMMING

Course Description and Objective*:*

The purpose of this course is to introduce to students to the field of programming using C language. The students will be able to enhance their analyzing and problem solving skills and use the same for writing programs in C.

Course Outcomes: After Completion of the course student should able to

- Know the basics of computer science
- Know concepts in problem solving
- To do programming in C language

UNIT - I

Introduction to Programming: Introduction to computer software, classification of computer software, programming languages, generation of programming languages. Introduction to C, structure of a C programming, compiling and executing C programs, data types, I/O statements and operators.

UNIT – II

Decision control and Looping Statements: Conditional branching statements, iterative statements, Nested loops, Break, continue, go to Statement.

UNIT - III

Functions: Introduction, function prototype, passing parameters, scope of variables, storage classes, recursive functions.

UNIT - IV

Arrays & Strings: Introduction, Defining an Array, Processing an Array, Passing Arrays to Functions, Multidimensional Arrays, Strings operations and array of strings.

UNIT – V:

Pointers & Structures:

Introduction to pointers**,** Pointer Declarations, Passing Pointers to a Function, Dynamic Memory Allocation, Operations on Pointers, Pointers and Multidimensional Arrays, Arrays of Pointers, Passing Functions to Other Functions**,** Defining a Structure, Processing a Structure, User-defined Data Types (Typedef), and Unions.

TEXT BOOKS:

1. Introduction to C Programming, Reema Thareja, Oxford University press, 1st Edition 2012.

REFERENCE BOOKS:

1. Foundations of computer science, Behrouz A. Forouzan, 2nd edition.
2. Byron S Gottfriend, “Programming with C”, Second Edition, Schaum Out Lines, TATA Mc Graw Hill (2007)
3. Sinha P., “Foundation of Computing”, BPB Publication, 1st Edition, 2003
4. Rajaraman V, "Fundamental of Computers" (2nd edition), Prentice Hall of India, New Delhi. 1996.