



**Dempo Charities Trust's
DHEMPE COLLEGE OF ARTS & SCIENCE
Miramar, Panaji-Goa**

Logic building and programming

[2 Credits 30 hours]

Course Objective:

The course is intended to prepare the students to solve logical problems that will help them in programming.

Learning Outcome:

The students will be able to design logical solutions to mathematical problems and convert them into flow chart and algorithms.

Course Content

1. Problem solving aspect: Top down, bottom up approach, Algorithms, Efficiency and analysis of algorithms (4)
2. Fundamental algorithms: Swapping two variables, Finding greatest of three numbers, Summation of a set of numbers, Reversing digits of an integer, Check is a number is prime, Generate Fibonacci numbers, Calculate factorial of a number, raising a number to a power (14)
3. Array techniques: Reverse array elements, find maximum or minimum of an array, Removing duplicates from array (6)
4. Merging, sorting and searching: Sorting array: insertion, selection, quick sort, sequential and binary searching (6)

References:

1.R.G. Dromey, How to solve it by computer

Shaw
Ms Shilpa Nark