Kannada Sangha Pune's

Kaveri College of Arts, Science and Commerce, Pune

BBA(CA)

Name of the Course: **Principles of Programming and Algorithms**

Eligibility: **12th Pass**

Duration: **30 hours**

Fees: **will be announced before starting the course.**

Number of students: **80**

Objectives of the Course:

1. To develop Analytical / Logical thinking and Problem solving capabilities.
2. To facilitate hands on practical sessions on Computer fundamental and Scratch Programming.

Syllabus:

Sr. No	Topics	No. of Lectures
Unit 1	Algorithm 1.1 Concept: Problem, Algorithm. 1.2 Characteristics of an algorithm. 1.3 Examples 1.3.1 Addition / Multiplication of integers 1.3.2 Determining if a number is +ve / -ve , even / odd 1.3.3 Maximum of 2 numbers , 3 numbers 1.3.4 Sum of first n numbers, sum of given n numbers, Sum of digits of a given number, sum of first and last digit of aNumber. 1.3.5 Digit reversing, Table generation for number n, Factorial of a number, Prime number, Factors of a number, Perfect number, Palindrome number , Armstrong number, GCD And LCM of 2 numbers.	6
	Flowchart 2.1 Introduction 2.2 Symbols	3

Unit 2	2.3 Draw flowcharts for algorithms implemented in chapter	
Unit 3	Function 3.1 Definition, Syntax. 3.2 Introduction to Library functions : such as pow( ),sqrt( ) etc 3.3 Recursion 3.3.1. Factorial of a number. 3.3.2. Sum of digits of a given number.	**2**
Unit 4	Array 4.1 Introduction 4.2 Algorithms and Flowcharts using array 4.2.1. Maximum and minimum element from an array 4.2.2. Reversing elements of an array 4.2.3. Mean and Median of n numbers 4.2.4. Row major and Column major representation of an array 4.2.5. Sum of elements of an array 4.2.6. Matrices: Addition, Multiplication,Transpose, Symmetry, upper/lower triangular .	**4**
	Practical Session	**15**

Course Outcomes:

1. Students will develop Analytical / Logical thinking and Problem solving capabilities.
2. Students will get hands on practical sessions on Computer fundamental and Scratch Programming.

Mrs. Sujata Bachhav
Course Coordinator, BBA(CA)

Principal