

ST. JOSEPH'S EVENING COLLEGE (AUTONOMOUS)

DEPARTMENT OF COMPUTER APPLICATIONS

TEACHING PLAN

BCA I Semester (June, 2018 to September, 2018)

SUBJECT: PROGRAMMING IN 'C'

Objective of the subject: C language is a high-level programming language which forms the basis to understand its successor languages such as C++ and Java.

Name of the Faculty: Ms. Megha S R

Time/Hours required – 60 hrs

Sl. No.	Module and Topics	No. of Hours.	Teaching methods	Evaluation of Learning process
UNIT 1	Introduction To Programming:	10	Lecture/ACTIVITY	Exercise problems and Assignment problems
	Problem Solving Using Computers: Language Classification, Problem Analysis, Algorithm and Flowchart design.	(3)		
	Algorithms: Steps in developing algorithms, advantages and disadvantages.	(3)		
	Flowcharts: Symbols used in developing flowcharts, advantages and disadvantages.	(2)		
	Coding, testing, debugging, Documentation and maintenance. Program development and modular design.	(2)		
UNIT 2	Introduction To C Programming:	(5)	Lecture/ACTIVITY	Exercise problems and Assignment problem
	History, Structure of a C program, C Conventions, Character Set, Identifiers, Keywords, Simple Data types, Modifiers, Variables, Constants.	(2)		

	<p>Operators (Arithmetic operator, relational operator, logical operator, ternary operator, unary operator, shorthand operator, bit-wise operator and arithmetic operator) Operator precedence.</p> <p>Input and Output operation: Single character input and output, formatted input and output, Buffered input.</p>	<p>(2)</p> <p>(1)</p>		
UNIT 3	<p>Control Structures:</p> <p>Introduction, Conditional statement, if statement, if-else statement</p> <p>nested if statement, else-if statement</p> <p>switch statement. Goto statement.</p> <p>Looping statement, while statement, do-while statement,</p> <p>for statement, break and continue, nested for statement.</p>	<p>10</p> <p>(2)</p> <p>(2)</p> <p>(2)</p> <p>(2)</p> <p>(2)</p>	Lecture/ACTIVITY- Programs to be written down.	Exercise problems and Assignment problems
UNIT 4	<p>Arrays:</p> <p>Introduction (One and two dimensional), Declaration of arrays</p> <p>Initialization of arrays, processing with arrays.</p> <p>String manipulation, declaration of string arrays,</p> <p>string operations.</p>	<p>9</p> <p>(2)</p> <p>(2)</p> <p>(3)</p> <p>(2)</p>	Lecture/ACTIVITY- Programs to be written down.	Exercise problems and Assignment problems
UNIT 5	<p>Functions:</p> <p>Introduction, advantages of subprograms, Function definition</p> <p>function call, Actual and formal arguments, local and global variables,</p> <p>function prototypes, types of functions,</p> <p>recursive functions, arrays and functions</p>	<p>10</p> <p>(2)</p> <p>(3)</p> <p>(2)</p> <p>(3)</p>	Lecture/ACTIVITY- Programs to be written down.	Exercise problems and Assignment problems

UNIT 6	Storage Classes, Structures and Unions:	5	Lecture/ACTIVITY- Programs to be written down.	Exercise problems and Assignment problems
	Introduction, types of storage classes,	(1)		
	Introduction to structures, Advantages of structures, accessing elements of a structure,	(2)		
	nested structures, array of structures, functions and structures,	(1)		
	Unions, bit-fields, enumerated data types.	(1)		
UNIT 7	Pointers:	5	Lecture/ACTIVITY- Programs to be written down.	Exercise problems and Assignment problems
	Introduction, pointer variable, pointer operator, pointer arithmetic,	(3)		
	pointers and arrays, pointers	(1)		
	Strings, array pointers, dynamic allocation.	(1)		

BOOKS:

1. Kanetkar, Yashavant: **“Let Us C”**, 7th Edition. BPB Publications.
2. Gottfried, Byron S: **“Programming with C”**, Tata McGraw-Hill.
3. Balagurusamy, E: **“Programming in ANSI C”** 2nd Edition. Tata McGraw-Hill
4. Deitel, H M and Deitel P J: **“C How to Program”**, 2nd Edition. Prentice-Hall.