MARIS STELLA COLLEGE, VIJAYAWADA-8

(Affiliated to Krishna University, Machilipatnam)

CERTIFICATE COURSE

SYLLABUS

Course Title: Programming in C **Course Code: 20CERPC1**

Course Duration: 30 Hrs. **Credits: 1**

Objectives

- To develop programming skills
- To choose the right data representation formats based on the requirements of the problem
- To plan structure and content, writing, updating and modifying computer programs for user solutions

Course outcomes

CO1: Understand the syntax and semantics of programming language

CO2: Use the 'C' language constructs in the right way.

CO3: Design, develop and test the programs in 'C'

Unit-I **(10 Hrs.)**

Introduction to Programming –High level languages, flowcharts – algorithms – Language Interpreters – Compiling, running, and understanding first program – comments, declaration - C – Language – History - Character set – variables – constants – keywords - Data types - Operators.- declaration of variables, printf function and scanf function. Control Structures-Decision making – the if – statement – the if else construct - Nested if statement – the else if construct, the Switch statement – Goto -Break- Continue-Looping control structures - for, while and do while.

Unit-II **(10 Hrs.)**

Arrays - single dimensional - double dimensional array – multi dimensional array– Strings - string functions - strlen( ) - strcpy( ) -Strcat( ) - strcmp( ) –strrev().

Functions – Defining a function – types of functions – recursion in functions - automatic, extern, static and register storage classes. Structures – Initialization of structures – Array of structures - Unions – declaration – usage.

Unit-III **(10 Hrs.)**

Pointers – definition – declaration – Pointers and functions, pointers and arrays , Files – types of files – file operations – input and output operations in files, the # define statement – the # include statement – preprocessor directives.

Prescribed Books

1. Reema Thareja, Programming in 'C', Oxford university press. (Chapters: 1 to 10)
2. Stephen G. Kochan, Programming in C, Third Edition, Pearson Education [2007] (Chapters: 1 to 14, 16, 17)

Reference Books

1. Beyron S Gottfried, Programming with C, Second Edition, Tata McGraw Hill (2007).
2. Ashok N. Kamathane, Programming with ANSI and Turbo C, Pearson Education (2008).
3. Balaguruswamy.E, Fundamentals of computing, TMH (2008).