ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

III SEMESTER **COMPUTER SCIENCE**  TIME:3HRS/WEEK

COM 3303 (4) **PROGRAMMING WITH C &C++** MAX MARKS:100

w.e.f.20-21 admitted batch-“20AH” **SYLLABUS**

**OBJECTIVES :**To enable the students to:

* Describe the basics of c/c++ the programming process, and the compilation process.
* Know the design and implementation

**COURSE OOUTCOMES:**

After Completion of this course the student would be able to:

* Able to Understand And Visualise The Inner Workings Of Computer Systems.
* Describe The Advantages Of A High Level Language Like C/C++, The Programming Process, And The Compilation Process.
* Describe and Use Software Tools In The Programming Process.
* Apply good programming principles to the design and implementation of C/C++ Programs.

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| **I** | **INTRODUCTION AND CONTROL STRUCTURES:**  History of ‘C’ - Structure of C program – C character set, Tokens, Constants, Variables, Keywords, Identifiers – C data types - C operators - Standard I/O in C -Applying if and Switch Statements |
| **II** | **LOOPS AND ARRAYS:**  Use of While, Do While and For Loops - Use of Break and Continue Statements - Array Notation and Representation - Manipulating Array Elements - Using Multi Dimensional Arrays |
| **III** | **STRINGS AND FUNCTIONS:**  Declaration and Initialization of String Variables - String Handling Functions -Defining Functions - Function Call - Call By Value, Call By Reference – Recursion |
| **IV** | **CLASSES AND OBJECTS:**  Introduction to OOP and its basic features - C++ program structure - Classes and objects - Friend Functions-Constructor – Types of constructors – Destructors. |
| **V** | **INHERITANCE:**  Inheritance - Types of Inheritance -Types of derivation- Public – Private - Protected Hierarchical Inheritance - Multilevel Inheritance – Multiple Inheritance - Hybrid Inheritance |

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