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|  | **BCA112: OBJECT ORIENTED PROGRAMMING WITH C++** | L T P C  3 0 2 4 |
| Version No. | 2.0 | |
| Course Prerequisites: |  | |
| **Objective:**  To introduce students to the concept of object oriented programming. The basic features of object oriented programming such as data hiding, operator overloading, inheritance are given emphasis. Solving problems, which involve object orientation using C++. | | |
| **Expected Outcome**:  1. | | |
| Unit I | INTRODUCTION |  |
| Introduction to OOP- Overview of C++ - Classes - Structures - Union - Friend Functions - Friend Classes - Inline Functions - Constructors - Destructors - Static Members - Scope Resolution Operator. | | |
| Unit II | POINTERS |  |
| Array of Objects - Pointer to Object - This Pointer - References - Dynamic Memory Allocation - Function Overloading - Default Arguments - Overloading Constructors. | | |
| Unit III | OPERATORS |  |
| Operator Overloading - Member Operator Function - Friend Operator Function - Inheritance - Types of Inheritance - Protected Members - Virtual Base Class - Polymorphism - Virtual Functions - Pure Virtual Functions. | | |
| Unit IV | CLASS |  |
| Class Templates and Generic Classes - Function Templates and Generic Functions - Overloading a Function Template - Exception Handling - Namespaces. | | |
| Unit V | I/O STREAMS |  |
| I/O Streams - Formations I/O with ios Class Functions and Manipulators - Overloading << and >> - File I/O. | | |
| **Text Books**  1. Herbert Schildt, C++ - The Complete Reference, Third Edition -Tata McGraw Hill - 1999.  2. Bruce Eckel, Thinking in C++, Second Edition, Volume One, Pearson Education Asia, 2000. | | |
| **References** | | |
| **Mode of Evaluation** | Assignments/Quizzes/Seminars/CAT/Term-end | |