BCY231T03	OBJECT ORIENTED PROGRAMMING WITH C++	L	T	P	C
		3	2	0	4

(For Students admitted from 2024 onwards)
Common for B.Sc. (CS) / B.Sc. (Data Science) / B.Sc. (Cyber Security)

COURSE OBJECTIVES:

- To introduce the basic concepts of Object Oriented Programming.
- To acquire knowledge on C++ functions.
- To become aware of significant classes and Objects.
- To impart knowledge on inheritance and polymorphism concepts in C++.
- To explore various file I/O Operations.

COURSE OUTCOMES:

- Understand the basic concepts and need of Object oriented programming.
- Explain the various keywords and Tokens in C++.
- Describe the various class concepts in C++.
- Explain the basic principles of inheritance and polymorphism
- Examine the various file I/O operations.

SYLLABUS

UNIT - I

Introduction to C++ - Principles Of Object Oriented Programming (OOP) – Basic Concepts of OOP - Benefits of OOP – Applications of OOP – Tokens – Keywords – Identifiers – Variables – Operators – Manipulators - Expressions.

12

UNIT - II

Decision Making Statements – Looping Statements - Functions - Main Function - Function Prototyping – Passing Parameters to Functions - Values Return by Functions – Inline Functions - Friend Functions.

12

UNIT - III

Classes and Objects - Constructors and Destructors - Types of Constructor - Inheritance – Types of Inheritance – Function Overloading - Operator Overloading.

12

UNIT - IV

Pointers - Virtual Functions and Polymorphism - Managing Console I/O operations - Templates Introduction – Function templates

12

UNIT – V

Working with Files – Classes for File Stream Operations – Opening and Closing of a File – Updating a File - End of File Deduction.

12

TOTAL: 60

TEXT BOOKS:

1. Herbert Schildt(2017), "C++ Complete Reference", Fourth edition, TMH,
2. Bjarne Stroustrup, (2013)“The C++ programming language”, Addison Wesley,
3. Balaguruswamy, “Programming in C++”, 5th Edition, Tata McGraw Hill Education Private Limited, 2011.

REFERENCE BOOKS:

1. Paul J.Deitel , Harvey M.Deitel, “C++: How To Program”, Prentice Hall, 2010
2. Robert Lafore, “Object Oriented programming Using C++”. Waite’s Group, 1999.

BCY231P06	OBJECT ORIENTED PROGRAMMING LAB	L	T	P	C
		0	0	5	2

(For Students admitted from 2024 onwards)

COURSE OBJECTIVES

- To be able to get trained in programming skills using C++
- To help the students to write the programs using Inheritance and friend functions.
- To learn and write the programs for operator overloading .
- To learn and write the programs for String concepts in C++.
- To impart the knowledge to write the program for Friend class.

COURSE OUTCOMES

- Ability to implement application programs using C++ Language
- Able to implement Inheritance and Friend functions concepts
- Understand and implement Array operations.
- Knowledge on implementing This pointer Techniques.
- Knowledge on implementing Friend class.

LIST OF EXERCISES

1. Program to display Employee details Using Classes and Object.
2. Program to find the Mean Value Using Friend Function.
3. Program to Implement Inline Function.
4. Program to Implement Arrays.
5. Program to implement Multiple Inheritance.
6. Program To Implement This Pointer.
7. Program to Implement Friend class.
8. Program to Implement Function overloading.
9. Program to Implement Operator Overloading.
10. Program to Implement String concepts.