ADVANCED PROGRAMMING LANGUAGE

Course code: 19EC5DEAPL **Credits: 03**
L: P: T: S: 3:0:0:0 **CIE Marks: 50**
Exam Hours: 03 **SEE Marks: 50**
Total Hours: 40

COURSE OBJECTIVES:

1. Understand features of OOPS concepts.
2. Significance of Data security.
3. Analyze the problem statement and build object oriented system model.
4. Describe the characters and behavior of the objects comprising system.
5. Explain function overloading, operator overloading and virtual functions.
6. OOPs model approach to address real time issues.

COURSE OUTCOMES:

At the end of the course, student will be able to

CO1	To understand the basics of Object Oriented Programming concepts.
CO2	Gain knowledge on different types of function and their applications.
CO3	Develop programs using fundamental concepts of programming.
CO4	To understand importance of inheritance and develop complex programs.
CO5	Program real time programs using exception handling.
CO6	Develop an applications on OOP programming using C++.

Mapping of Course outcomes to Program outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO1												
CO2												
CO3												
CO4												
CO5												
CO6												

Unit	Course Content	Hours	COs
1	**Introduction to OOPs & C++:** OOP concepts**,** Applications, structure of C++ program, Different Data types & Operators, precedence, operator overloading and control structures in C++ , Namespaces	**08**	CO1
2	**Functions, classes and Objects:** Functions, function overloading, friend and Virtual and pure virtual functions, Class, memory allocation to objects, array of objects, pointers to members & member functions	**08**	CO1 & CO2
3	**Constructors, Destructors and Operator overloading:** Constructors, Multiple constructors in a class, Copy constructor, Dynamic constructor, Destructors, Operator overloading, Overloading Unary and binary operators, Manipulation of strings using operators	**08**	CO3
4	**Inheritance, Pointers, Virtual Functions, Polymorphism:** Derived Classes, Single, multilevel, multiple inheritance, Pointers to objects and derived classes, this pointer,	**08**	CO3, CO4
5	**Exception Handling:** Basics of exception handling and its mechanism, Throw, Catch of the mechanism, specify Exceptions, Exceptions In constructors and destructors, operator overloading functions, Briefing about files	**08**	CO5, CO6

NOTE:

1. Questions for CIE and SEE not to be set from self-study component.
2. Assignment Questions should be from self-study component only.

TEXT BOOK:

1. Object Oriented Programming with C++, E. Balaguruswamy, TMH, 6th Edition, 2013.

REFERENCES BOOKS:

1. Let us C++ Yashwanth Kanetkar
2. The C+ + Programming Language 3rd Edition, Bjarne Stroustrup
3. C++ A Beginner's Guide, Herbert Schild
4. Object Oriented Programming using C++, Robert Lafore, Galgotia publication 2010.