

PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA (AUTONOMOUS)
INFORMATION TECHNOLOGY

OBJECT ORIENTED PROGRAMMING THROUGH C++ Lab
(Common to CSE & IT)

Course Code:	20IT3352	Year:	II	Semester:	I
Course Category:	PC Lab	Branch:	CSE/IT	Course Type:	Practical
Credits:	1.5	L-T-P:	0-0-3	Prerequisites:	Programming for Problem Solving
Continuous Internal Evaluation:	15	Semester End Evaluation:	35	Total Marks:	50

COURSE OUTCOMES

Upon successful completion of the course, Student will be able to

CO1	Apply Object oriented principles/ C++ constructs for solving problems.	Apply, Self-Learning	L3
CO2	Implement programs as an individual on different IDEs/ online platforms.	Individual Performance, Modern Tools	
CO3	Develop an effective report based on various programs implemented.	Communication	
CO4	Apply technical knowledge for a given problem and express with an effective oral communication.	Apply, Communication	L3
CO5	Analyse outputs using given constraints/test cases.	Analyse	L4

SYLLABUS

Sl. No.	CONTENTS	Mapped CO
1	Implement programs on predefined streams.	CO1-CO5
2	Implement programs using functions (passing arguments, overloading).	CO1-CO5
3	Implement programs using class/object concepts. (Access specifiers, class members, static members)	CO1-CO5
4	Implement programs using friend functions.	CO1-CO5

5	Implement programs using constructor(s) and destructor.	CO1-CO5
6	Implement programs using operator overloading.	CO1-CO5
7	Implement various types of inheritance techniques.	CO1-CO5
8	Implement programs using virtual functions to achieve polymorphism.	CO1-CO5
9	Implement programs using File Streams	CO1-CO5
10	Implement programs on exception handling concepts.	CO1-CO5
11	Implement programs on generic programming concept with templates.	CO1-CO5
12	Implement containers in C++ (Sequence Containers and Associative Containers).	CO1-CO5

Learning Resources

Text Books

1. Programming in C++, Ashok N. Kamthane, 2nd Edition, 2013, Pearson.

References

1. The C++ Programming Language, Bjarne Stroustrup, 4th Edition, 2013, Addison-Wesley.
2. Object-Oriented Programming Using C++ Paperback, Joyce Farrell, 4th Edition, 2013, Cengage.

e-Resources and other Digital Material

1. <https://www.learncpp.com/>
2. https://onlinecourses.nptel.ac.in/noc21_cs02/preview
3. <https://www.educative.io/courses/learn-object-oriented-programming-in-cpp>
4. <https://www.youtube.com/watch?v=wN0x9eZLix4> (Learn Object Oriented Programming in C++, Beau Carnes, February 2021)
5. <https://www.geeksforgeeks.org/the-c-standard-template-library-stl/>