



**ACADEMIC LESSON PLAN FOR WINTER SEMESTER-2025**  
**Dept. of Comp. Engg. & IoT, Govt. Polytechnic, Balasore.**  
**Name of the Faculty : Er. Kaushik Murmu LECT. Stage-II(CSE)**

**PROGRAMMING WITH C++**

Course Code : CEIPC 201/Th1	Teachers Assessment : 10 Marks
Theory : 3 P/W	Internal Assessment : 20 Marks
Total Periods : 45 P/ Sem	End Semester Exam : 70 Marks
Examination : 3 Hours	TOTAL MARKS : 100 Marks
Sem : 3 <sup>rd</sup> Comp. Engg. & IoT	Start : 14 <sup>th</sup> July 2025

WEEK	PERIOD	TOPIC
1st	1 <sup>st</sup>	<b>UNIT 1.1 Introduction to Object Oriented Programming:</b> 1.2 User defined types
	2 <sup>nd</sup>	1.3 Structures 1.4 Unions
	3 <sup>rd</sup>	1.5 Polymorphism 1.6 Encapsulation
2 <sup>nd</sup>	1 <sup>st</sup>	1.7 Getting started with C++ syntax 1.8 Datatype
	2 <sup>nd</sup>	1.9 Variables 1.10 Strings
	3 <sup>rd</sup>	1.11 Functions 1.12 Default values in functions
3 <sup>rd</sup>	1 <sup>st</sup>	1.13 Recursion 1.14 Namespaces
	2 <sup>nd</sup>	1.15 Operators
	3 <sup>rd</sup>	1.16 Flow control
4 <sup>th</sup>	1 <sup>st</sup>	1.17 Arrays
	2 <sup>nd</sup>	1.18 Pointers.
	3rd	UNIT-2 Abstraction mechanism: Classes
5th	1st	2.1 private 2.2 public
	2nd	2.3 Constructors 2.4 Destructors
	3rd	2.5 Member data 2.6 Member functions
6th	1st	2.7 Inline function 2.8 Friend functions
	2nd	2.9 Static members 2.10 References
	3rd	2.11 Inheritance: Class hierarchy 2.12 Derived classes
7th	1st	2.13 Single inheritance 2.14 Multiple inheritance 2.15 Multilevel inheritance
	2nd	2.16 Hybrid inheritance 2.17 Role of virtual base class
	3rd	2.18 Constructor and destructor execution
8th	1st	2.19 Base initialization using derived class constructors
	2nd	UNIT 3 Polymorphism: 3.1 Binding
	3rd	3.2 Static binding, Dynamic binding,

WEEK	PERIOD	TOPIC
9th	1st	3.4 Static polymorphism: Function Overloading
	2nd	3.5 Ambiguity in function overloadind
	3rd	3.6 Dynamic polymorphism: Base class pointer
10th	1st	3.7 Object slicing 3.8 Late binding
	2nd	3.9 Method overriding with virtual functions
	3rd	3.10 Pure virtual functions
11th	1st	3.11 Abstract Classes
	2nd	Unit 4 Operator Overloading:
	3rd	4.1 This pointer
12th	1st	4.2 Applications of this pointer
	2nd	4.3 Operator function
	3rd	4.4 Member and non-member operator function
13th	1st	4.4 Member and non-member operator function
	2nd	4.5 Operator overloading
	3rd	4.5 Operator overloading
14th	1st	4.6 I/O Operators
	2nd	Unit 5 Exception Handling
	3rd	5.1 Try, Throw & Catch
15th	1st	5.2 Exceptions and Derived classes
	2nd	5.3 Function exception declaration
	3rd	5.4 Unexpected exceptions