

RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR THE COURSE			FORMAT-3	Sheet No. 1/3
Branch	COMPUTER HARDWARE AND MAINTENANCE				Semester	Third
Course Code	C04	Course Name	Object Oriented Programming with C++			
					Teach Hrs	Marks
Course Outcome 1	Describe basic constructs of C++ programming.				35	15
Learning Outcome 1	Explain the general structure, applications and process of setting up a development environment for C++.				11	05
Contents	Concept of C++, applications of C++, Basic structure of C++ program, main function, user defined functions, steps of installing/setting a compiler, compiling and files created by the compiler, running the program, perform Output using cout, Input with cin directives.					
Learning Outcome 2	Use various data types, operators, header files available in C++.				12	05
Contents	Primitive and user defined data types, Creating variables. Unary, binary and ternary operators. Arithmetic operators, Assignment operators, Relational operators, Logical operators, Bitwise operators. Comments, include header files.					
Learning Outcome 3	Write C++ programs using basic constructs.				12	05
Contents	Output using cout, Input with cin directives. Conditional statements if-else, switch case, iterative statements- for, while, do-while. Working with strings. Purpose of header files. Using include directive for header files.					

Method of Assessment	Paper pen test		
Course Outcome 2	Use Classes & Objects to object-oriented problems	35	30
Learning Outcome 1	Describe principles of Object-Oriented Programming.	05	05
Contents	Object oriented programming paradigm, Basic concepts of Object-Oriented Programming, Advantages of Object-Oriented Programming. Class, object, Encapsulation, Abstraction, polymorphism, Inheritance.		
Learning Outcome 2	Create classes, objects and access its member functions and variables.	11	10
Contents	Basic syntax and structure of a Class. Declare/define Variables and methods in a class, static members of class. Creating objects and access class members using dot operator. Access Modifiers - Public, Private, Protected.		
Learning Outcome 3	Develop programs using constructor and destructor.	11	10
Contents	Properties of constructors. How to use a constructor. Difference between constructor and a method. Default constructor. Parameterized Constructors, copy constructor. Properties of destructor. Difference between destructor and a method. Default destructor.		
Learning Outcome 4	Identify Compile/Run time errors and fix them.	8	5
Contents	Errors in C++ - Syntax errors, Run-time Errors, Linker Errors, Logical Errors, Semantic errors		
Method of Assessment	Paper pen test		
Course Outcome 3	Apply inheritance and exception handling to software problems in C++.	35	25

Learning Outcome 1	Explain inline function and friend functions, exception handling.	08	05
Contents	Need for Exception Handling. Try, catch blocks and throw keyword, declaring and defining inline and friend functions.		
Learning Outcome 2	Use inheritance to derive properties and characteristics of a parent class in child class	14	10
Contents	Concept of inheritance, Is-A relationship. Defining Base/parent class, derived/child class. Effect of access control in Inheritance		
Learning Outcome 3	Carry out overloading and overriding of functions.	13	10
Contents	Compile time and runtime Polymorphism. Overloading of methods and constructors. Overriding of methods. Difference between overloading and overriding.		
Method of Assessment	Paper pen test		