Lecture Plan – Academic Year 2019-20

Semester: IV

Course: SYBSc-IT Class: Subject: OOPS

(Prashant M. Savdekar)

Unit No.	Topic	Plan	Teaching Methodology with Time Frame	Learning Outcome
1.	**Object Oriented Methodology Principles of OOPS**	**Learning Objective** To introduce basic concepts of OOPS, Advantages and Disadvantages of Procedure Oriented Languages, what is Object Oriented? What is Object Oriented Development? Object Oriented Themes, Benefits and Application of OOPS. OOPS Paradigm, Basic Concepts of OOPS: Objects, Classes, Data Abstraction and Data Encapsulation, Inheritance, Polymorphism, Dynamic Binding, Message Passing.	**Contact Sessions** 12 Lectures **Interactive modes** With the help of Projector & white board **Date** **25/11/2019 to 14/12/2019**	At the end of this unit student will get basic knowledge about C++ programming and they can simple C++ program
2.	**Classes and Objects Constructors and Destructors**	To introduce basic concepts of Simple classes (Class specification, class members accessing), Defining member functions, passing object as an argument, Returning object from functions, friend classes, Pointer to object, Array of pointer to object. Introduction, Default Constructor, Parameterized Constructor and examples, Destructors	**Contact Sessions** 12 Lectures **Interactive modes** With the help of Projector & white board **Date** **02/01/2020 to 15/01/2020**	By the end of this unit, students will be able to run C++ program using objects.
3.	**Polymorphism: Virtual Functions**	To introduce basic concepts of function overloading, overloaded operators, overloading unary and binary operators, overloading comparison operator, overloading arithmetic assignment operator, Data Conversion between objects and basic types. Introduction and need, Pure Virtual Functions, Static Functions, this Pointer, abstract classes, virtual destructors.	**Contact Sessions** 12 Lectures **Interactive modes** With the help of Projector & white board **Date** **16/01/2020 to 27/01/2020**	By the end of this unit students will learn to create functions C++
4.	**Program development using Inheritance Exception Handling**	To introduce basic concepts of inheritance, Advantages provided by inheritance, choosing the access specifier, Derived class declaration, derived class constructors, class hierarchies, multiple inheritance, multilevel inheritance, containership, hybrid inheritance. Introduction, Exception Handling Mechanism, Concept of throw & catch with example	**Contact Sessions** 12 Lectures **Interactive modes** With the help of Projector & white board **Date** **28/01/2020 to 07/02/2020**	By the end of this unit students will learn to create inheritance and error handling in C++
5.	**Templates: Working with Files**	To introduce basic concepts of Function Template and examples, Class Template and examples. Introduction, File Operations, Various File Modes, File Pointer and their Manipulation.	**Contact Sessions** 12 Lectures **Interactive modes** With the help of Projector & white board **Date** **08/02/2020 to 21/02/2020**	By the end of this unit students will able to create templets in C++ programming.

6.	**All unit**	Revision of all unit including practical	**Contact Sessions** 8 Lectures **Interactive modes** BB and Computer **Date** (22/02/2020 12/03/2020)	By the end of this course, students will be able to run C++ programs