## LESSON PLAN

**Discipline** : Computer Engineering

**Semester** :3rd

**Subject** :Object Oriented Programming(PC-CS203A)

**Lesson Plan Duration** :15 weeks (from August 2022 to December 2022)

\*\*Work Load(Lecture/Practical) per week (in hours): Lectures:3

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| **Week** | **Theory** |
| **Lecture Day** | **Topic(including assignment/test)** |
| 1st | 1st | Unit-1 :Introduction to C++, C++ Standard Library |
| 2nd | Illustrative Simple C++ Programs, Header Files, Namespaces |
| 3rd | Application of object oriented programming. |
| 2nd | 4th | Object Oriented Concepts, Introduction to Objects and Object Oriented Programming- encapsulation. |
| 5th | Abstract Classes |
| 6th | Accessifier (public/ protected/ private), Class Scope and Accessing Class Members |
| 3rd | 7th | Controlling Access Function, Constant |
| 8th | Class Member |
| 9th | Structure and Class |
| 4th | 10th | Unit-2 :Friend Function and Friend Classes |
| 11th | This Pointer |
| 12th | Dynamic Memory Allocation and Deallocation (New and Delete) |
| 5th | 13th | Static Class Members |
| 14th | Constructors |
| 15th | Parameter Constructors and Copy Constructors |
| 6th | 16th | Deconstructors |
| 17th | Introduction of inheritance, Types of Inheritance |
| 18th | Overriding Base Class Members in a Derived Class |
| 7th | Minar test 1 |

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|  | 19th | Effect of Constructors and Deconstructors of Base Class in Derived Classes. |
| 20st |  Unit-3 :polymorphism |
| 8th | 21nd | Pointer to Derived class |
| 22rd | Virtual Functions |
| 23th | Pure Virtual Function |
| 9th | 24th | Abstract Base Classes |
| 25th | Static and Dynamic Binding |
| 26th | Virtual Deconstructors |
| 10th | 27th | Fundamentals of Operator Overloading |
| 28th | Rules for Operators Overloading |
| 29th | Implementation of Operator Overloading Like <<,>> |
| 11th | 30st | Implementation of Operator Overloading of Unary Operators |
| 31nd | Implementation of Operator Overloading of Binary Operators |
| 32th | Test of Unit-3 |
| 12th | 33th | Unit-4 :Text Streams and binary stream Sequential and Random Access File |
| 34th | Stream Input/ Output Classes |
| 35th | Stream Manipulators |
| 13th | 36th | Basics of C++ Exception Handling |
| 37th | Try, Throw, Catch, multiple catch, Re-throwing an Exception |
| 38th | Exception specifificaion |
| 14th | Minar test 2 |
| 15th | 43th | Templates: Function Templates , Overloading Template Functions  |
| 44th | Class Template |
| 45th | Non- Type Template arguments |