

# Bhoj Reddy Engineering College for Women: Hyderabad

## Department of Information Technology

Lesson plan of faculty member for the academic year 2020–21

Class: II B Tech

Branch-Section: IT - A

Semester: I

Subject: Object Oriented Programming through C++

Lectures per week: 2

Lecture Number	Topics to be covered	Date (s)
<b>UNIT – I</b>		
1	Different paradigms of problem solving, need for OOP paradigm	01 September 2020
2	Differences between OOP and procedure-oriented programming, Overview of OOP concepts-Abstraction, Encapsulation, Inheritance and Polymorphism	02 September 2020
3	C++ Basics: Structure of a C++ program, Data Types, Declaration of variables, Expressions, Operators, Operator precedence	08 September 2020
4	Evaluation of expressions, Type conversions, Pointers, Arrays, Pointers and Arrays, Strings, Structures, References	09 September 2020
5	Flow Control Statements: if, switch, while, for, do, break, continue, goto statements.	15 September 2020
6	Functions- Scope of Variables, Parameter Passing, Default arguments, Inline functions, Recursive functions	16 September 2020
7	Pointer to functions, Dynamic memory allocation and de-allocation operators-new and delete, Preprocessor directives.	22 September 2020
<b>UNIT - II</b>		
8	C++ Classes and Data Abstraction: Class Definition, Class structure, Class Objects, Class scope.	23 September 2020
9	This pointer, Friends to a class, Static members	29 September 2020
10	Constant member functions, Constructors and Destructors	30 September 2020
11	Dynamic creation and destruction of objects, Data abstraction, ADT and information hiding.	06 October 2020
<b>UNIT – III</b>		
12	Inheritance: Defining a class hierarchy, Different forms of inheritance	07 October 2020
13	Defining base and derived classes, Access to the base class members.	13 October 2020
14	Base and Derived class constructors	14 October 2020
15	Destructors, Virtual Base class	27 October 2020
16	Virtual Functions and Polymorphism: Static and Dynamic binding	28 October 2020
17	Virtual functions	10 November 2020
18	Dynamic binding through virtual functions	11 November 2020
19	Virtual function call mechanism	17 November 2020
20	Pure Virtual Function, Abstract classes	18 November 2020
21	Implications of polymorphic use of classes	24 November 2020
22	Virtual destructors.	25 November 2020
<b>UNIT - IV</b>		
23	C++ I/O: I/O using C functions, Stream class hierarchy	01 December 2020
24	Stream I/O	02 December 2020
25	File Streams and String streams	08 December 2020
26	Overloading Operator	09 December 2020
27	Error Handling during file operations	15 December 2020
28	Formatted I/O.	16 December 2020

**UNIT - V**

29	Exception Handling: Benefits of exception handling	22 December 2020
30	Throwing an Exception	23 December 2020
31	The try block, Catching an exception	29 December 2020
32	Exception Specification	30 December 2020
33	Stack unwinding	23 December 2020
34	Rethrowing an exception, Catching all Exceptions.	28 December 2020
35	Revision	30 December 2020

**Text books:**

1. The Complete Reference C++, 4th Edition, Herbert Schildt, Tata McGraw Hill.
2. Problem Solving with C++: the Object of Programming, 4th edition, Walter Savitch, Pearson Education.

Name and signature of the faculty:

Minhaj Begum

----

Name and signature of Head of the Department:

C Murugamani

----