

TEACHING LEARNING EVALUATION PLAN

Regulation : 2023-24

Course Code : 21BCA204

Course Title : OBJECT ORIENTED PROGRAMMING USING C++

MCA 2nd Semester, 1st Year

Unit	Lecture Schedule	Topics	Pedagogy	Learning Outcome	Activity
I	1, 2	Principles of Object Oriented Programming (OOP) : Evolution of C++ -Programming Paradigms - Key Concepts of OOP	Presentation Slides, White board & Marker	Understanding of OOPs concepts	PPT, Discussion
	3 - 6	Advantages of OOP - Usage of OOP and C++ .Input and Output in C++	Presentation Slides, White board & Marker	Knowledge of I/O in C++	PPT, Discussion
	7-9	Streams-Stream classes Unformatted console I/O operations	Presentation Slides, White board & Marker	Knowledge of Streams and console operations	PPT, Discussion Quiz
	10-12	Member functions of iostream class- manipulators- manipulators with parameters		Understanding of member functions and using manipulators	PPT, Discussion
II	13-14	Declaring, Defining and Initializing Variables, Scope of Variables, Using Named Constants	Presentation Slides, White board & Marker	Knowledge of basic elements used in programming	Discussion Quiz
	15-16	Keywords, Data Types, Casting of Data Types		Knowledge of data types	Discussion
	16-22	Operators (Arithmetic, Logical and Bitwise), Using Comments in programs, Character I/O (getc, getchar, putc, putchar etc)		Knowledge of operators and functions for I/O	Discussion
	23-24	Formatted and Console I/O (printf(), scanf(), cin, cout), Using Basic Header Files (stdio.h, iostream.h, conio.h)		Knowledge of formatted and console functions	Discussion

III	25-26	Principles of Object-Oriented Programming, Defining & Using Classes	Presentation Slides, White board & Marker	Understanding of OOPS principles	PPT
	27-33	Class Constructors, Constructor Overloading Function overloading in classes, Class Variables & Functions, Objects as parameters		Knowledge of constructors usage in classes & related functions	PPT
	34-36	Specifying the Protected and Private Access, Copy Constructors, Overview of Template classes and their use.		Knowledge of Access specifiers and their use	PPT
IV	37-38	Introduction to Inheritance (Multi-Level Inheritance, Multiple Inheritance)	Presentation Slides, White board & Marker	Knowledge of inheritance & its types	PPT Assignment
	39-43	Polymorphism (Virtual Functions, Pure Virtual Functions)		Knowledge of polymorphism	PPT Assignment
	44-46	Need of Overloading functions and operators, Overloading functions by number and type of arguments		Knowledge of overloading functions in C++	PPT Assignment
	47-48	Overloading Operators (including assignment operators, unary operators).		Knowledge of overloading operators in C++	PPT Assignment
V	49-51	Byte Stream, Character Stream	Presentation Slides, White board & Marker	Understanding of character stream	PPT Assignment
	52-54	File IO Basics		Knowledge of file basic concepts	PPT Assignment
	55-57	File Operations		Knowledge of file operations in C++	PPT Assignment
	58-60	Creating file, Reading file, Writing File.		Knowledge of file related functions	PPT Assignment