LESSON PLAN

Subject Name	:	**PROGRAMMING LANGUAGES**
Paper Code	:	**CSC4016/INF4016** Session: **2021-2022**
Program Name	:	**M.Sc.(CS/IT)** Semester: **Fourth**
Faculty Name	:	**Pranamika Kakati**
Date	:	**01/01/2022 to 01/06/2022**

Detailed Lesson Plan

UNIT-I (ProgrammingLanguage concepts)

Lecture No	Topics to be Covered
1	Factors influencing the evolution of programming languages
2	influence of architecture and operating system, implementation methods
3	Development in programming methodology, desirable features and design issues
4	Basic concepts of Language processors
5	Syntax, semantics
6	Virtual Computers
7	Binding and Binding time.

UNIT-II (Imperative Programming Languages)

8	Introduction to Statements, data types
9	subprograms, sequence control, data control,
10	dynamic allocation using pointers
11	operating and programming environment
12	Subprogram activation
13	parameter passing methods, scope rules for names
14	Nested procedures
15	Syntax and translation.

16	Static scope programs
17	Dynamic scope programs

UNIT-III (Object Oriented Languages)

18	Data abstraction: object oriented thinking
19	class, grouping of data and operations
20	constructors and destructors
21	templates
22	Inheritance: Extending a class
23	casting up the hierarchy, single and multiple inheritances
24	Virtual base class.
25	Polymorphism:
26	Compile time polymorphism
27	operator and function overloading
28	static binding
29	run-time polymorphism
30	virtual functions, pure virtual functions
31	abstract class
32	dynamic binding
33	Exception handling

UNIT-IV (Functional Programming Languages)

34	Principles of functional programming
35	Types-values, bindings and functions
36	environment and scope
37	recursive functions
38	polymorphic functions
39	typevariables
40	Lists and programming with lists (LISP)

41	Functional programming in C++

UNIT-V (Logic Programming Languages)

42	Review of Predicate Logic
43	Logic as a language for problem solving. Facts, rules, queries and deductions, sentence structure
44	General structure and computational behavior of logic programs
45	Unification algorithm
46	Procedural interpretation of Logic
47	Algorithmic view of logic program execution
48	A brief introduction to PROLOG

With regards,

Yours faithfully,

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