DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name:Dr. S.C Gupta **Subject Name:Principles of Programming Languages**

Branch/Semester: - 3rd Sem **Subject Code:-ES-205**

Sr. No.	Lecture No.	Topics Covered	Planned on	
1	L 1	**Unit-1:** **Introduction**: A brief history	**17/7/19**	
2	L 2	Characteristics of a good programming language	**19/7/19**	
3	L 3	Programming language translators compiler & interpreters	**24/7/19**	
4	L 4	Elementary data types – data objects	**26/8/19**	
5	L 5	Variable & constants	**31/7/19**	
6	L 6	Data types, Specification & implementation of elementary data types	**01/8/19**	
7	L 7	Declarations ,type checking & type conversions	**06/8/19**	
8	L 8	Assignment & initialization, Numeric data types	**07/8/19**	
9	L 9	Enumerations, Booleans & characters.	**08/8/19**	
10	L 10	**Syntax & Semantics**: Introduction, general problem of describing syntax	**13/8/19**	
11	L 11	Formal method of describing syntax, attribute grammar dynamic semantic.	**14/8/19**	
12	L 12	**Unit-2:** **Structured data objects :** Structured data objects & data	**20/8/19**	

		types		
13	L 13	Specification & implementation of structured data types	**21/8/17**	
14	L 14	Declaration & type checking of data structure	**22/8/17**	
15	L 15	Vector , arrays and records	**27/8/17**	
16	L 16	Character strings, variable size data structures	**28/8/17**	
17	L 17	Union, pointer & programmer defined data objects	**29/8/17**	
18	L 18	Sets and files	**03/9/17**	
19	L 19	**Subprograms and Programmer Defined Data Types: :** Evolution of data type concept abstraction	**04/9/17**	
20	L 20	Encapsulation , information hiding and Subprograms	**10/9/17**	
21	L 21	Type definitions, abstract data types, Over loaded subprograms and generic subprograms.	**11/9/17**	
22	L 22	**Unit-3:** **Sequence Control:** Implicit & explicit sequence control	**12/9/17**	
23	L 23	Sequence control within expressions	**17/9/17**	
24	L 24	Sequence control within statement	**18/9/17**	
25	L 25	Subprogram sequence control: simple call return, recursive subprograms	**19/9/17**	
26	L 26	Exception & exception handlers, co routines, sequence control.	**17/9/17**	
27	L 27	Concurrency – subprogram level concurrency, synchronization through semaphores	**17/9/17**	
28	L 28	**Data Control:** Names & referencing environment, Static & dynamic scope	18/10/17	
29	L 29	Block structure , Local data & local referencing environment	21/10/17	

30	L 30	Shared data: dynamic & static scope. Parameter & parameter transmission schemes	24/10/17	
31	L 31	**Storage Management:** Major run time elements requiring storage, programmer and system controlled storage management & phases	**25/10/17**	
32	L 32	Static storage management, Stack based storage management	7/11/17	
33	L 33	Heap storage management, variable & fixed size elements.	8/11/17	
34	L 34	**Programming Languages:** Introduction to procedural, non-procedural, structured languages	**11/11/17**	
35	L 35	Logical, functional and object oriented programming language	14/11/17	
36	L 36	Comparison of C & C++ programming languages.	14/11/17	
37	L 37	Revision	**15/11/17**	
38	L 38	Test (1-2)	18/11/17	
39	L 39	Test (3-4)	21/11/17	

Text Books:

1. Terrence W. Pratt, Marvin V. Zelkowitz, Programming Languages Design & Implementation, Pearson.

2. Allen Tucker & Robert Noonan, Programming Languages–Principles and Paradigms, Tata McGraw-Hill, 2009.

Reference Books:

1. Ellis Horowitz, Fundamentals of Programming Languages, Galgotia Publications, 2010.
2. C. Ghezzi, Programming Languages Concepts, Wiley Publications, 2010.

Note: Examiner will set eight questions by selecting two from each unit. Students will be required to attempt five questions selecting at least one question from each unit.

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