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Lesson Plan (CORE, Semester V, July to November 2022)

Name of Teacher	Dr Sarita Kadian	Department	Computer Science
Course	B.A prog	Semester	V
Paper	Programming with python	Academic Year	2022-2023

Learning Objectives

The course introduces programming in Python and develops Python-based solutions for simple problems.

Learning Outcomes

On successful completion of this course, a student will be able to:

1. select a suitable programming construct and inbuilt data structure for a situation.
2. develop and document modular Python programs.
3. use classes and objects in application programs.

Lesson Plan

Week No.	Theme/Curriculum	Any Additional Information
1	Introduction to Python Structure of a Python program, understanding Python interpreter/Python shell.	
2	Introduction to Python (contd..) Identifiers and keywords, literals, Python data types, Operators: arithmetic operator.	
3	Introduction to Python (contd..) Relational operators, logical operators, Python standard libraries, variables and assignment statements.	

4	Introduction to Python (contd..) Notion of class, object.	
5	Functions Built-in functions such as input and print, function definition and call, default parameter values.	
6	Creating Python Program: Input and output statements, control statements - branching, looping.	
7	Creating Python Program (contd.): Exit function, break, continue and pass, mutable and immutable structures, strings, tuples.	
8	Control Structures : If statement, for loop.	
9	Control Structures (contd..) While loop, exit function, break and continue statements.	

References

1. Downey, A. B. (2015). *Think Python—How to think like a Computer Scientist* (2nd Edition). O'Reilly.
2. Severana, O. C. (2018). *Python for Everybody (Exploring Data in Python 3)*. Shroff Publisher.

Additional Resources

1. Dromey, R.G (2006). *How to Solve it by Computer*. Pearson.
2. Guttag, J. V. (2016). *Introduction to computation and programming using Python*. MIT Press.
3. Liang, Y. D. (2013). *Introduction to programming using Python*. Pearson.
4. Taneja, S., & Kumar, N. (2017). *Python Programming- A modular Approach*. Pearson.