

**SES's L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE
(AUTONOMOUS)**



BOARD OF STUDIES: Information Technology and Data Science

Programme: B.Sc. (Cyber Security & Digital Forensics)

Semester: I

Nomenclature of the Course: Programming Fundamentals using Python Lab

NEP Vertical: Major

Credit: 01

Total Marks: 25

Academic Year: 2026–27

(As per Choice Based Credit System under NEP 2020)



Practical Component

List of Practical

1. Basic Python Programs
 - Print statements
 - Simple arithmetic operations
2. Conditional Statements
 - Program to check even/odd
 - Program to find largest of three numbers
3. Looping Programs
 - Multiplication table
 - Factorial using loop
4. Pattern Programs
 - Simple star patterns
 - Number patterns
5. String Operations
 - Reverse a string
 - Check palindrome
6. List Operations
 - Insert, delete, traverse list
 - Find maximum and minimum in list
7. Functions
 - Write user-defined function
 - Program using function to calculate sum of digits
8. File Handling
 - Create and write to file
 - Read file contents
9. Exception Handling
 - Handle division by zero
 - Use try-except block
10. Mini Application (Basic Security-Oriented Program)
 - Password strength checker
 - OR
 - Simple log file reader (count number of entries)

Learning Objectives

1. To develop logical thinking using Python.
2. To implement control structures and functions.
3. To practice file handling and exception handling.
4. To build simple programs relevant to Cyber Security.

Course Outcomes (CO)

CO No.	Course Outcome	Bloom's Level
CO1	Write basic Python programs	Apply (L3)
CO2	Implement conditional and looping constructs	Apply (L3)
CO3	Develop programs using functions and lists	Apply (L3)
CO4	Create programs using file and exception handling	Apply (L3)
CO5	Design simple security-related applications	Apply (L3), Analyze (L4)

Evaluation Scheme

Component	Marks
Journal	5
Viva Voce	5
Practical Examination	15
Total	25