



SLC (University of Delhi) Shyam Lal College

NAAC A++

IQAC

in collaboration with

Department of Computer Science

presents

Add-on Course (30 Hours) Fundamental Course on Python

24th February – 10th March, 2025



Important Dates and Time:

Registration Starts: 19th February, 2025

Registration Ends: 23th February, 2025

Course Commences: 24th February, 2025

Course Ends: 10th March, 2025.

Mon-Sat (5pm onwards)



Scan the QR code for
registration

Participation Fee: Rs. 100

**Name of Account: Shyam Lal College
Conference and Seminars Account**

Account No. 3731428412

IFSC Code: CBIN0283941

****All the participants shall be
issued e-certificate upon
successful completion of the
course***

Members

Dr. Neelam Dabas

Dr. Pranav Dass

Dr. Leena Singh

Mr. Parveen Kumar

**Prof. Kusha Tiwari
Director IQAC**

**Dr. Sushil Kumar
Convenor**

**Prof. Rabi Narayan Kar
Patron & Principal**

Syllabus

Course Name: Fundamental Course on Python (30hrs)

Date: 24th February 2025-10th March 2025

Curriculum/Course Outline:

Introduction to Programming

The basic Model of computation, Algorithms, Programming Languages, compilation, testing & debugging and documentation. Introduction to Python, objects, expressions, variables, IDE

Introduction to Python

Python Introduction, Technical Strength of Python, Introduction to Python Interpreter and program execution, Using Comments, Literals, Constants, Python's Built-in Data types, Numbers (Integers, Floats, Complex Numbers, Real, Sets), **Operators** (Arithmetic, Relational, Logical, Bitwise operators and their precedence), Printing statements, Simple programs, Accepting input from Console.

Expressions and Python Statements

Assignment statement, expressions, Conditional statements: if, if-else, if-elif-else; simple programs

Control Flow Statement

Notion of iterative computation and control flow –range function, While Statement, For loop, break statement, Continue Statement, Pass statement, else, assert

Functions- User Defined

Top-down approach of problem solving, Modular programming and functions, Function parameters, Local variables, the Return statement, global statement, Default argument values

In built Data Structures

Lists, tuples and dictionary, (Slicing, Indexing, Concatenation, other operations on Sequence datatype), concept of mutability, Examples to include finding the maximum, minimum, mean; linear search on list/tuple of numbers, and counting the frequency of elements in a list using a dictionary.

In-Built Functions

Library function-input(), eval(), print(), String Functions: count(), find(), rfind(), capitalize(), title(), lower(), upper(), swapcase(), islower(), isupper(), istitle(), replace(), strip(), lstrip(),rstrip(), split(), partition(), join(), isspace(), isalpha(), isdigit(), isalnum(), startswith(), endswith(), encode(), decode(), String: Slicing, Membership, Pattern Matching, Numeric Functions: eval(), max(), min(), pow(), round(), int(), random(), ceil(), floor(), sqrt()

The Department of Computer Science and IQAC at Shyam Lal College organized a 30-hour Add-on Course titled “Fundamental Course on Python” from 24th February to 10th March 2025. A total of 15 students enrolled in the course. The online program began with an inaugural session held on 24th February 2025 via Google Meet. The session was initiated by Dr. Sushil Kumar, TIC of the Department of Computer Science, who welcomed Prof. Rabi Narayan Kar, Principal of Shyam Lal College. Principal Kar highlighted the significance of Python in today’s world. Dr. Sushil Kumar also expressed gratitude to the principal for his continuous support and encouragement, mentioning that the course was inspired and motivated by him. Additionally, he welcomed other resource persons from the Department of Computer Science, including Dr. Neelam Dabas, Dr. Pranav Dass, Dr. Leena Singh, and Mr. Parveen Kumar. Following this, each resource person introduced themselves to the participants and outlined the topics they would be covering. Dr. Sushil Kumar also discussed the various applications of Python with the participants.

This course was designed as the course in programming to develop problem solving skills. The course was focused on modularity, reusability, code documentation, and debugging skills.