

# Python Internship Syllabus 2022

- 1) Basics of Python.
  - A) Current versions are in use.
  - B) How to define a variable and how it will interpret at runtime.
  - C) Importance of Indentation.
    - Standard Indentation and Mixed Indentation issues.
  - D) Python Keywords.
    - Ref: <https://www.geeksforgeeks.org/python-keywords/>
  - E) Print and String Formatters with Format Specifiers (%d, %f).
    - Ref: <https://www.geeksforgeeks.org/python-output-formatting/>
    - [www.geeksforgeeks.org/python-output-using-print](https://www.geeksforgeeks.org/python-output-using-print)
  - F) Operator and Expressions.
    - Ref: <https://realpython.com/python-operators-expressions/>
  - G) Python Manual using Terminal
- 2) Data Types.
  - Ref: <https://www.geeksforgeeks.org/python-data-types>
- 3) Control Flow.
  - A) If
  - B) If .. else
  - C) Nested if
- 4) Loops with Control Flow Statements.
  - A) for
  - B) range() and its parameters.
  - C) while
  - D) continue
  - E) break
  - F) pass
- 5) Functions: Definition Creation and Calls.
  - A) Without Parameters.
  - B) With Parameters.
  - C) How to and when default parameters are set?.
  - D) What is an ambiguity error and how to resolve it?
  - E) Return multiple values
- 6) Global, Local and Nonlocal Variables.

- Ref: [www.programiz.com/python-programming/global-local-nonlocal-variables](http://www.programiz.com/python-programming/global-local-nonlocal-variables)
- 7) Decorators.
- Ref: <https://www.geeksforgeeks.org/decorators-in-python/>
- 8) Recursive Functions.
- Ref: <https://www.geeksforgeeks.org/recursive-functions/>
- 9) Data Structures (Number of data structures and signature only).
- Ref: [https://python.swaroopch.com/data\\_structures.html](https://python.swaroopch.com/data_structures.html)
  - <https://towardsdatascience.com>
  - Signatures of data structure.
  - Different ways to define and store in variables.
  - Difference between data structures.
- 10) Generic Built-in Functions with Data Structures.
- Ref: [https://www.w3schools.com/python/python\\_ref\\_functions.asp](https://www.w3schools.com/python/python_ref_functions.asp)
  - Type conversion and Type Cast.
- 11) String Operations.
- 12) Date and Datetime Operations.
- 13) OS and Sys Library.
- 14) List Comprehension and Discry Comprehension.
- 15) Lambda.
- 16) Generic Built-in function that used to manipulate data.
- Prefer <https://www.geeksforgeeks.org/> website for below functions.
  - map and filter.
  - any v/s all and min v/s max.
  - sum and count
  - zip
  - sort (Ascending and Descending Order).
  - sorted (Ascending and Descending Order).
- 17) Exception Handling.
- try ... except.
  - else
  - finally
- 18) Class and Object.
- 19) Doubt Solution.
- 20) Exam (Will be conducted on Aktiv Online Exam Application).

#Sessions	#Day	#Topic	Summery	Estimated Hour(s)	Conducted By
1	1	1		01:00	
2	1	2, 3, 4		01:00	
3	2	5, 6		01:00	
4	2	7, 8		01:00	
5	3	9		00:30	
6	3	10	- List and Tuple Operations. - List functions. - Built-in Functions like: len, sort, sorted, type cast etc.	01:00	
7	4	10	- Set and Dictionary operations.	01:00	
8	5	11		01:00	
9	5	12		00:30	
10	5	13		00:30	
11	6	14, 15		01:00	
12	6	16		01:00	
13	7	17, 18		01:00	
14	8	19	Doubt Solution	01:30	
15	9	19	Doubt Solution	02:00	
16	10	20	Exam		