

'Core Python' Language -Syllabus

GETTING STARTED • History & need of Python • Application of Python • Advantages of Python • Disadvantages of Python • Installing Python • Program structure • Interactive Shell • Executable or script files. • User Interface or IDE

PYTHON FUNDAMENTALS • Working with Interactive mode • Working with Script mode • Python Character Set • Python Tokens, Keywords, Identifiers, Literals, Operators • Variables and Assignments • Input and Output in Python

OPERATORS • Arithmetic Operators • Relational Operators • Logical Operators • Membership Operators • Identity Operators • Bitwise Operators • Assignment Operators • Operators Precedence • Evaluating Expression • Type Casting

DATA HANDLING • Data Types Numbers → Strings → Lists → Tuples → Dictionary → Set → Frozenset → Bool → Mutable and Immutable

STRING MANIPULATION • Introduction to Python String • Accessing Individual Elements • String Operators • String Slices • String Functions and Methods

LIST MANIPULATION • Introduction to Python List • Creating List • Accessing List • Joining List • Replicating List • List Slicing

TUPLES • Introduction to Tuple • Creating Tuples • Accessing Tuples
• Joining Tuples • Replicating Tuples • Tuple Slicing

DICTIONARIES • Introduction to Dictionary • Accessing values in
dictionaries • Working with dictionaries • Properties

SET AND FROZENSET • Introduction to Set and Frozenset •
Creating Set and Frozenset • Accessing and Joining • Replicating and
Slicing

PROGRAM CONTROL FLOW • **Conditional Statements** → The if
Statement → The if-else Statement → The if-elif Statement → Nested
if Statements → Python Indentation

Looping and Iteration → The For Loop → The While Loop → Loop
else Statement → Nested Loops → Break and Continue

• **The Range Function** → Introduction to range() → Types of range()
function → Use of range() function

INTRODUCTION TO FUNCTIONS • Built-In Functions →
Introduction to Functions → Using a Functions → Python Function
Types → Structure of Python Functions → E.g. - map, zip, reduce,
filter, any, chr, ord, sorted, globals, locals, all, etc

User Defined Functions → Structure of a Python Program w.r.t.
UDF → Types of Functions → Invoking UDF → Flow of Execution →

Arguments and Parameters → Default Arguments, Named Arguments
→ Scope of Variables → Lambda function • Recursion Function → Use
of recursion function

→ **Note :- More than 100 programs will be practiced during the course.**

Popular IDE for 'Python' language

- IDLE(BY DEFAULT)
- PyCharm
- VS Code
- Sublime Text3
- Atom
- Jupyter etc.

Network