3 Months Python Programming Training Certification Course Outline

Module 1: Introduction to Python

- First, learn what Python is and why it is popular.
- Next, understand Python applications in web, data, and AI.
- Then, install Python on your computer.
- Finally, open Python IDE and explore the interface.

Module 2: Writing Your First Python Code

- First, write a simple "Hello, World!" program.
- Next, run the program to see the output.
- Then, learn how to save Python files.
- Finally, practice printing messages with different words.

Module 3: Variables and Data Types

- First, understand variables as containers for data.
- Next, learn numbers, strings, and booleans.
- Then, assign values to variables correctly.
- Finally, print variables to see their values.

Module 4: Basic Operators

- First, use arithmetic operators like +, -, *, /.
- Next, try comparison operators like >, <, ==.
- Then, explore logical operators like and, or, not.
- Finally, combine operators in simple expressions.

Module 5: Input from Users

- First, learn how to take input using input() function.
- Next, store input in a variable.
- Then, convert input into numbers if needed.
- Finally, print the input to check it works.

Module 6: Conditional Statements

- First, learn if statements to check conditions.
- Next, use else to handle alternative actions.
- Then, apply elif for multiple choices.
- Finally, practice small decision-making programs.

Module 7: Loops in Python

- First, understand while loops for repeated tasks.
- Next, use for loops to go through items.
- Then, learn break and continue for control.
- Finally, practice loops with simple examples.

Module 8: Functions

- First, learn how to create functions using def.
- Next, pass parameters to functions.
- Then, return values from functions.
- Finally, call functions to perform tasks repeatedly.

Module 9: Lists and Tuples

- First, create lists to store multiple items.
- Next, access list items using index numbers.
- Then, learn about tuples for fixed data.
- Finally, loop through lists and tuples easily.

Module 10: Dictionaries and Sets

- First, understand dictionaries as key-value pairs.
- Next, access and update dictionary items.
- Then, learn about sets for unique values.
- Finally, practice using dictionaries and sets in programs.

Module 11: File Handling

- First, open a file using open() function.
- Next, read and write data to files.
- Then, close files after using them.
- Finally, try simple file-based programs.

Module 12: Certification & Mini Project

- First, review all modules and practice exercises carefully.
- Next, complete a mini project using Python concepts.
- Then, submit your project for evaluation.
- Finally, receive your **Python Programming Certificate** for course completion.

+92-308-5145-822 www.technocation.pk info@technocation.pk