

ITShare Company

01122339966-01122339955

Mostafa@iteshare.com

Python Course

Module 1: Getting Started with Python

- Introducing Python
- Installing Python on Windows
- Installing Python on Linux and other Operating Systems
- Introducing Python IDLE
- Programming in Interactive Mode
- Programming in Scripting Mode

Module 2: Types, Variables and Input/Output

- Using quotes and escape character
- String Concatenation and Repeater Operators
- Using Mathematical Operators with Numbers
- Understanding Variables
- Getting User Input with input()
- Using Strings Methods
- Converting Values

Module 3: Flow Control in Python

- The if Statement
- The else Clause
- Using elif Clause
- The while Statement
- Avoiding infinite loops
- Values as conditions
- Using Logical Operators
- Planning Your Program with Pseudocode

Module 4: For Loops and Tuples

- Using for Loops
- Using Sequence Operators and Functions with Strings
- Finding Length with len()
- Using the in Operator
- Indexing and Slicing Strings
- Using Random Module
- Using Tuples
- Sequence Operators and Functions with Tuples

Module 5: Lists in Python

- Creating and Using Lists
- len() with Lists
- in Operator with Lists
- Indexing, Slicing and Concatenating
- Deleting List Element with del
- Using Lists Methods such as append(), sort(), reverse(), count(), pop(), remove(), insert() and index()
- Using Nested Sequences
- Understanding Shared References

Module 6: Dictionaries

- Using Dictionaries
- Accessing Dictionary values
- Adding, Replacing and Deleting key-value pairs
- Functions: get(), keys(), values() and items()

Module 7: Functions in Python

- Defining Functions
- Using Parameters and Return Values
- Using Arguments and Defaults Parameters
- Using Global Variables and Constants
- Variable Scope
- References

Module 8: File Input and Output and Exceptions

- The open Function
- Input from Text Files
- Output to Text Files
- Storing Complex Data in Files with Pickles Sand Shelve
- Handling Exceptions
- Using try Statement with except Clause
- Handling Multiple Exceptions

Module 9: Object-Oriented Python

- Introduction to Object-Oriented Python
- Creating Classes, Methods and Objects
- Using Constructor and Attributes
- Using Class Attributes and Static Methods
- Understanding Object Encapsulation
- Private Attributes and Methods
- Controlling Attribute Access
- Creating and Accessing Properties
- Combining Objects
- Using Inheritance to Create New Classes
- Altering Behavior of Inherited Methods
- Understanding Polymorphism

Module 10: Modules

- Using Modules in Programs
- Writing Modules
- Importing Modules
- Using Imported Functions and Modules

Module 11: Graphical Application Development

- Examining A GUI
- Understanding Event Driven Programming
- Introduction to Tkinter Module

- Using Root Window
- Creating Frames
- Using Labels and Buttons
- GUI Programs with Classes
- Binding Widgets and Event Handlers
- Using Text and Entry Widgets
- Using the Grid Layout Manager
- Using Check and Radio Buttons

Course Prerequisites

There are no prerequisites to take up this Python training. However, it is recommended that participants have a basic understanding of programming languages with data structures and how algorithms work.