

**Course** : **PYTHON**  
**Duration** : **60 Days**  
**Course Fees** : **`3,500/-**

## **Course Coverage**

### **1. Introduction to python**

- History of Python, Why to learn python, How is Python Different from other programming languages, Installing Python and path setting, How to run python programs

### **2. Basics of Python**

- Variable, Identifier, Keywords, Statements & Comments, Indentation, Data types(number,string,list,tuple,set, dictionary), Static Typing vs Dynamic Typing, Input and output.

### **3. Operators**

- Arithmetic operator, Relational Operator, Assignment Operator, Logical operator, Bitwise operator, Membership Operator, Identity Operator.

### **4. Control Flow**

- If statement, If – else, If – elif –else, Nested if – else, While loop, for – in loop, Nested loop, Loop with else, Pass statement, Break and continue.

### **5. Functions**

- Function Basics, Defining function, Function call, Return statement, Function parameters, Call by value or call by reference, Local and global variable, Recursion, Anonymous (lambda) function.

### **6. Modules & Packages**

- Defining module, How to create module, Importing module, Dir (), Defining package, How to create package, Importing package.

### **7. Numeric Types**

- Numeric type basics, Numbers, Hexadecimal, Octal and Binary Notation, Complex Numbers, Type casting, Numeric Functions, Random number generation.

### **8. String**

- Defining a string, Different ways to create string, Accessing elements of string, Escape sequence, Raw string, String methods, String formatting Expressions.

### **9. List**

- Defining a list, Creating list, Accessing list elements of list, Deleting list, List methods, Functions used with list, List comprehension, Implementation of stack and queue using list, Use of Zip (), Matrix operations using list.

### **10. Tuple**

- Defining a tuple, Creating a tuple, Accessing elements of tuple, Immutability, List vs tuples, Tuple Methods, Functions used with tuple, Advantage of Tuple.

### **11. Dictionary**

- Defining a dictionary, Creating a dictionary, Accessing elements of dictionary, Deleting a dictionary, Dictionary methods, Dictionary Comprehension.

### **12. Set**

- Defining a set, Creating set, Set operations, Set methods, Set comprehension.

### **13. File Handling**

- Defining a file, Types of file, File operations, Opening a File, Closing file, File modes, File attributes, Writing to file, Reading from file, Appending to file.

### **14. Exception Handling**

- Defining an exception? Default exception handler, Exception handling techniques, Detecting Exception (try), Catching exceptions (catch), Catching multiple exceptions, Raising exception (raise), Finally block, User defined exceptions.

### **15. Object Oriented Programming**

- Oop concepts, Defining a class, Creating object, Method vs function, Calling methods, Instance attribute vs class attribute, Instance method vs class method, Private attribute and method, Static method, Method Overloading, Constructor, List of objects, Inheritance, Method overriding, Operator overloading, Abstract method, Abstract class.