

# Python– Syllabus

**Course Duration: 10 Hours**

## **Course Summary:**

1. Python Introduction - 1 Hour
2. Basics- 1 Hour
3. Control Flow - 1 Hour
4. Data Structures - 1 Hour
5. Functions - 1 Hour
6. Modules - 1 Hour
7. Exceptions , File I/O - 1 Hour
8. Class - 1 Hour
9. Packages, Regular Expressions - 1 Hour
10. Real Time Project - 1 Hour

## **01 PYTHON INTRODUCTION**

- Python features
- Python usecases
- Python + IDE Installation
- Hello world program

## 02 BASICS

- Variables
- Simple Input/Output
- Primitive Data Types
- Indentation
- Strings
- Type casting
- Operators

## 03 CONTROL FLOW

- conditional statements
- for and while loops

## 04 DATA STRUCTURES

- List
- Tuple
- Set
- Dictionary

## 05 FUNCTIONS

- passing arguments/parameters
- passing data structures
- passing functions
- passing variable arguments
- output return value

- nested functions
- scope
- recursions

## 06 MODULES

- built-in modules - os, shutil, math, sys
- user defined modules
- dir()

## 07 EXCEPTIONS , FILE I/O

### Exceptions

- Built-in exceptions
- Raising exceptions
- Handling exceptions
- User defined exceptions
- assert

### File I/O

- File modes
- file reading and writing
- with statement

## 08 CLASS

- Object Oriented Programming
- Creating Classes
- Objects
- Class Variables

- Instance Methods
- Inheritance
- Polymorphism
- Custom Exception Classes

## 09 PACKAGES , REGULAR EXPRESSIONS

### Packages

- Python Code Hierarchy
- Package Installer Program (PIP)
- Installing PIP
- Installing Packages using PIP
- List packages
- Uninstall packages
- Show package
- create package

### Regular Expressions

- basics
- re module
- splitting text
- writing regex patterns

## 10 REAL TIME PROJECT