**Python Basics : 1.5 days Training**

**Day 1:**

**Module 1 Introduction to Python, Data Types, Quotations**

· Python Interpreter and its Environment

· Python 3.x: Background, Relevance

· Numbers

· Strings

· Declaration of variables

**Module 2 Conditional statements/Control Structures**

· If Statements

· While construct

· For Statements

· Break and continue Statements, and else clauses on Loops

· Pass Statements

**Module 3 Python basic data structures**

· Arrays, Lists and Tuples

· Dictionary and Sets

· List and array slicing

**Module 4 Functions**

· Local variables

· Default Argument Values

· Returning Values

· Keyword & Positional Arguments

· Arbitrary Argument Lists

· Documentation Strings

· Unpacking Argument Lists (unknown number of parameters )

· Lambda Expressions

**Module 5 Functional Programming**

· Lambda Forms

· list comprehension

· isalpha

· map

· apply

· reduce

· filter

**Day 2:**

**Module 6 Supplementary Topics**

· closure

· basic debugging

· pickle (binary files)

· File compression & decompression

· OS, SYS and PPRINT modules

**Module 7 Regular expressions**

· What is regular expression?

· Matching characters

· Compiling regular expressions

· Metacharacters like quantifiers, anchors, character classes, alternator etc.

· Strings and Slices

· Modifying Strings

· Use of triple quotes

· Repetition

· Group extraction and Substitution

**Module 8 MS Excel – Python interface**

* • Which module is needed?
* • Installation of module
* • Read and Write operations covering different Python data structures