



## TEERTHANKER MAHAVEER UNIVERSITY

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## Let's Play With Python Programming

Objective: After taking this course, you should be able to:• use Python interactively

- execute a Python script at the shell prompt
- use Python types, expressions, and None
- use string literals and string type
- use Python statements (if...elif..else, for, pass, continue, ... )
- understand the difference between expressions and statements
- understand assignment semantics
- write and call a simple function
- utilize high-level data types such as lists and dictionaries
- understand the difference between mutable and immutable types
- write a simple class and access methods and attributes
- import and utilize a module
- read from and write to a text file
- understand interpreter and compilers: CPython, PyPy, Cython
- see demonstration of IDE's: IDLE, IPython, 'Python Notebook,hosted environments
- understand the role of package managers: easy\_install, pip
- understand what NumPy does and what SciPy is (are?)
- learn about resources for learning Python

Introduction: History, Features, Setting up path , Working with Python , Basic Syntax ,  
Variable and Data Types , Operator, Conditional Statements: If , If- else , Nested if-else,  
Looping: For, While, Nested loops, Control Statements: Break, Continue, Pass

String Manipulation: Accessing Strings, Basic Operations, String slices, Function  
and

Methods, Lists: Introduction, Accessing list, Operation , Working with lists, Function and  
Methods, Tuple: Introduction, Accessing to Methods, Dictionaries: Introduction,  
Accessing values in dictionaries, Working with dictionaries, Properties,  
Functions

Functions: Defining a function, Calling a function, Types of functions, Function Arguments,  
Anonymous functions, Global and local variables, Modules: Importing module, Math module,  
Random module, Packages, Composition,

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Input-Output: Printing on screen, Reading data from keyboard, Opening and closing file,  
Reading and writing files, Functions, Exception Handling: Exception, Exception Handling,  
Except clause, Try ? finally clause, User Defined Exceptions.

