

NICT Computer Education (Python)

Syllabus Python

Introduction to shell programming and OOPs, Introduction to Python. Features of Python, applications of Python, Versions of Python. Downloading and Installation of Python Software
Programming in IDLE window. Standard I/O operations using print () and input (). Data types in Python, Usage of format () function with print (). Usage of type (), is instance () functions. Comments, Operators in python, example program.
Control Structures in python, Usage of pass keyword, python string, Break, Continue. Assignment 1
Collections in python. List and Tuple data type. Dictionary, set and string with built in methods. Usage of len(), sum(), max() and min().
Generators and iterators in python. Assignment 2
Function, Built in function, Defining user defined functions, Recursion, Passing arguments to function (default args, named args, required or positional args), Lambda functions, creation and usage of lambda functions. Assignment 3
File management and directory management in python.
Modules in python. Creating user defined function. Accessing, modules in another modules using import keyword
Regular expressions in python, Classes and objects in python. Constructors in python
Inheritance and polymorphism in python. Usage of super () function.
Networking in python using socket module,
Exception handling in python using try, except, finally and raise keywords Exception class hierarchy. Usage of assert statement. Assignment 4
Data base connectivity in python using MySQL database
Statement: create, insert, Delete, Update, sort, Order by. Assignment 5

Assignment for NICT Python Students:

Write a note on Python and also mention its benefits? 4 Marks
What are local variables and global variables in python? 4 Marks
How do you modify a string in python? 4 Marks
When to use "tuple" vs "list" vs "dictionary" in python? 4 Marks
What is Lambda Function in Python? 4 Marks
What is function of self? 4 Marks
Define Module? Explain with an example. 4 Marks
What is the use of super function? Explain with an Example. 4 Marks
Define Exception? Explain with an Example. 4 Marks
What are the steps to connect to database. Explain with an example. 4 Marks

Note: If student scores more than 35 marks in assignment, then the student has to submit the photocopies of the assignment to the counsellor.