Learning Python Basics

Course Outline:

Schedule	Major Topics Covered	lectures
Week - 01	▪ Introduction to programming in python ▪ Introduction to spyder IDE ▪ Introduction to Jupyter Notebook and colab	1 (15 min)
Week - 02	▪ Introduction to different terminologies in python ▪ Comparative study of MATLAB and python ▪ Indexing ▪ Vectorization, Broadcasting or Boolean Masking in python ▪ Introduction to numpy library ▪ Object oriented programming in python ▪ Mutable and immutable object	4 (1 hour) + 1 assignment (10 problems)
Week - 03	▪ Python list ▪ Operations on list	4 (1 hour) +

ASIF NEWAZ

Lecturer, Department of EEE, IUT

	▪ List methods ▪ Loops and conditional statements ▪ Alias ▪ Sorting list	1 assignment (10 problems)
Week – 04	▪ Python strings and different operations on strings ▪ Python tuples and different operations on tuples ▪ Python sets and different operations on sets ▪ Shortcut operations on sets ▪ Difference between different data types (e.g. list, tuple, set etc.) for data storage in python ▪ List comprehension	7 (1.30 hour) + 1 assignment (11 problems)
Week – 05	▪ Python dictionaries and different operations on dictionaries ▪ Sorting dictionaries ▪ User-defined Functions ▪ Functions with variable number of arguments ▪ Lambda Function ▪ Map, Filter, Reduce ▪ Introduction to other useful libraries in python	7 (2.00 hour) + 1 assignment (10 problems) Mock Test & Quiz

ASIF NEWAZ

Lecturer, Department of EEE, IUT