Year & Sem:	Course Code:	Course Name:	Credits:	L-T-P:
P2S2	I226	Information Technology	3	1-1-0

Syllabus

Unit-1
Lists: Concept of mutable lists, creating, initializing and accessing the elements, traversing, appending, updating and deleting elements, composition, lists as arguments
List operations: joining, slicing, + , * , in , not in List functions and methods: len( ), insert( ), append( ), extend( ), sort( ), remove( ), reverse( ), pop( ), list( ), count( ), extend( ), index( ), cmp( ), max( ), min( )

Unit-2
Dictionaries: Concept of key-value pair, creating, initialising and accessing the elements in a dictionary, traversing, appending updating and deleting elements
Dictionary Functions and methods: cmp( ), len( ), clear( ), get( ), has_key( ), items( ), key( ), update( ), values( ), pop( ), fromkeys( ), dict( )

Unit-3
Tuples: Immutable concept, creating, initialising and accessing elements in a tuple, Tuple assignment, Tuple slices, Tuple indexing,
Tuple Functions: cmp(), len(), max(), min(), tuple(), index(), count(), sum(), any(), all(), sorted(), reversed()

Unit-4
Searching and Sorting: Selection sort, Insertion sort, bubble sort, merge sort

Unit-5
Opening and reading files: Open text file-opening a text file-syntax-Different modes of opening a file-The file object attributes-Reading from text file-Introducing the Read it program-Example-Reading characters from a line-Reading a line from file-Problem set

Unit-6
Exception Handling Exception: Exception Handling - Except clause - Try ? finally clause - User Defined Exceptions

References:
Books:
1. Introduction to Python Programming by Rheema Tharaja
2. Biginning Python Using Python 2.6 and Python 3.1 by James Payne
3. Python for Informatics Version 2.7.1 by Charles Severance
URLs:
1. https://www.tutorialspoint.com/python/
2. https://docs.python.org/3/tutorial/

3. https://www.learnpython.org/
4. https://www.cbsesyllabus.in

Python Programming Language
Lab

Notes:

1. Do 12 experiments every week of the last class.
2. Distribution of Marks :
   a. Internal : 40 Marks
   i. Includes attendance (Not only lab attendance, will consider both lab and theory classes), observation, performance and internal viva
   b. External : 60 Marks
   c. Total : 100 Marks
3. For giving marks under Lab. Record each college will maintain practical assessment record by using the following procedure :
   a. Each student has to perform a minimum number of experiments prescribed in the syllabus.
   b. After the completion of a practical the teacher concerned will check the note book and conduct the viva voce of each student to find out how much concepts related to the theoretical and experimental part of the experiment he/she has understood. According to his/her performance marks will be recorded in their practical note book. These marks will constitute the lab record.
   c. To calculate the final marks for lab record a separate register for each class will be maintained.
   d. Each and every class every 30 students will be assigned to one teacher for weekly lab sessions.
   e. The lab record register will be presented to the external practical examiners for lab record marks.