With effect from the Academic Year 2019-20

VASAVI COLLEGE OF ENGINEERING(Autonomous)
IBRAHIMBAGH, HYDERABAD – 500 031

Department of Computer Science & Engineering
INTRODUCTION TO PYTHON PROGRAMMING (OPEN ELECTIVE-I)

SYLLABUS FOR B.E. III-SEMESTER
(Common for CIVIL, ECE, EEE & MECH)

L:T:P (Hrs./week): 2:0:0	SEE Marks : 60	Course Code : **U180E310CS**
Credits : 2	CIE Marks : 40	Duration of SEE : 3 Hours

COURSE OBJECTIVES	**COURSE OUTCOMES** *On completion of the course, students will be able to*
1 Acquire problem solving skills	1 Design python programs using arithmetic expressions and decision making statements
2 Develop flow charts	2 Design modular python programs using functions
	3 Develop programs using strings, list
3 Learn programming and solve problems using Python language	4 Develop programs using tuples and dictionaries
	5 Illustrate operations on Efficient Binary Search Trees and Multiway Search Trees.

UNIT-I:

Introduction to Python: variables, expressions and statements, order of operations

Conditionals: Modulus operators, Boolean expressions, logical operators, conditional execution, alternative executions, chained conditional, nested conditional

Iteration: while statement

12/7/19

UNIT-II:

Functions: function calls, type conversion and coercion, mathematical functions, User-defined functions, parameters and arguments.

Recursion

UNIT-III:

Strings: string length, string traversal, string slices and string comparison with examples, strings are immutable, find function, string module

List: list values, accessing elements, list traversal, list length, list membership, list and for loop, list operations with examples

UNIT-IV:

Tuples: Mutability, tuple assignment, tuple as return values

Dictionaries: dictionary operations, dictionary methods, aliasing and copying, counting letters using dictionaries

Learning Resources:

1. Downey A, How to think like a Computer Scientist :Learning with Python, 1st Edition(2015), John Wiley
2. Lambert K.A, Fundamentals of Python –First Programs, 1st Edition(2015), Cengage Learning India
3. Perkovic L, Introduction to Computing using Python,2/e, (2015), John Wiley
4. Stewart Venit and Elizabeth Drake, Prelude to Programming: Concepts and Design, 6th Edition(2015),Pearson India
5. Mark J Guzdial, Introduction to Computing and programming in Python, 3rdEdition(2013), Pearson India
6. Allen Downey, Think Python, 2nd Edition(2015),Shroff Publisher Orielly
7. http://nptel.ac.in/courses/117106113/34
8. https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-01sc-introduction-to-electrical-engineering-and-computer-science-i-spring-2011/python-tutorial/
9. www.scipy-lectures.org/intro/language/python_language.html

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The break-up of CIE: Internal Tests + Assignments + Quizzes

1	No. of Internal Tests	:	2	Max. Marks for each Internal Tests	:	30
2	No. of Assignments	:	2	Max. Marks for each Assignment	:	5
3	No. of Quizzes	:	2	Max. Marks for each Quiz Test	:	5

Duration of Internal Tests : 1 Hour 30 Minutes