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

INTRODUCTION TO SCRIPTING LANGUAGES
(Open Elective-I) (Common for CIVIL, ECE, EEE & MECH)
SYLLABUS FOR B.E. III SEMESTER

L:T:P (Hrs./week): 2:0:0	SEE Marks: 60	Course Code :**U200E320IT**
Credits : 2	CIE Marks: 40	Duration of SEE : 3 Hours

COURSE OBJECTIVES	COURSE OUTCOMES *On completion of the course, students will be able to*
This course will enable the students to acquire basic skills for writing python scripts.	1. Demonstrate basic knowledge of Python script. 2. Demonstrate an understanding of fundamental Python syntax and semantics and be fluent in the use of Python control flow statements and functions. 3. Construct python data structure programs using list, tuples, dictionaries, sets and numpy arrays. 4. Develop programs using Object oriented paradigm, and handle file related operations.

Unit – I
Introduction to Python, running a python script, writing comments, using variables, operators, expressions, strings and text, format specifiers, printing information. passing command line arguments, prompting users, parameters, unpacking variables.

Unit – II
Decision making: if and else if, repetition: while loops and for loops.
Defining functions, passing arguments to functions, returning values from functions, recursion.

Unit – III
Data structures: lists, operations on list, tuples, operations on tuples, sets, operations on sets, dictionaries, operations on dictionaries.
Numpy arrays: creation, access, slicing, matrix operations.

Unit – IV
Modules, Classes and Objects, is – a relationship: inheritance, has-a relationship: composition, Exception handling, File handling: reading and writing files, serialization using JSON.
Intro to Python Standard Library & other useful libraries: Scipy, Scikit, Pandas, Seaborn.

<u>Learning Resources</u>
1. Allen B. Downey, Think Python, 2nd Edition, Green Tea Press
2. "Learning Python", 5th Edition, O'reilly
3. https://www.python.org
4. https://nptel.ac.in/courses/106106182/
5. The Python Standard Library — Python 3.9.6 documentation
6. Python Tutorial (w3schools.com)
7. Best Python Libraries for Every Python Developer | by Claire D. Costa | Towards Data Science
8. Search results · PyPI

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   :   90 Minutes