PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)
KANURU, VIJAYAWADA-520007

I B.Tech – II Sem CSE (DATA SCIENCE)
PYTHON PROGRAMMING LAB

Course Code	20ES1255	Year	I	Semester	II
Course Category	Engineering Sciences Lab	**Branch**	CSE (Data Science)	**Course Type**	Practical
Credits	1.5	**L-T-P**	0-0-3	**Prerequisites**	-
Continuous Internal Evaluation :	15	**Semester End Evaluation:**	35	**Total Marks:**	50

	Course Outcomes	
Upon successful completion of the course, the student will be able to		
CO1	Apply knowledge of Python constructs for developing programs/applications.	**L3**
CO2	Conduct experiments as an individual or team member by using different IDEs/ online platforms of Python programming.	**L3**
CO3	Develop an effective report based on various programs implemented.	**L3**
CO4	Apply technical knowledge for a given problem and express it with effective oral communication.	**L3**
CO5	Analyze outputs using given constraints/test cases.	**L4**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)														
CO1	3													
CO2					2				1					
CO3										2				
CO4	2									1				
CO5		2										1		

		Syllabus	
Expt. No.		**Contents**	**Mapped CO's**
1		Explore Python IDE.	**CO1,CO2,CO3,CO4,CO5**
2		Apply Python programming basic constructs for developing the programs.	**CO1,CO2,CO3,CO4,CO5**
3		Python Programs to demonstrate decision-making and branching (Selection)	**CO1,CO2,CO3,CO4,CO5**
4		Python programs to demonstrate iterative statements.	**CO1,CO2,CO3,CO4,CO5**
5		Python programs to demonstrate functions	**CO1,CO2,CO3,CO4,CO5**
6		Python programs to perform operations on strings with built-in functions.	**CO1,CO2,CO3,CO4,CO5**
7		Python programs to perform operations on regular expressions with built-in functions.	**CO1,CO2,CO3,CO4,CO5**
8		Python programs to apply various structures (Lists, Tuple and Dictionaries) for developing the programs.	**CO1,CO2,CO3,CO4,CO5**
9		Installation of different packages.	**CO1,CO2,CO3,CO4,CO5**
10		Explore the NumPy package	**CO1,CO2,CO3,CO4,CO5**
11		Explore the Pandas package	**CO1,CO2,CO3,CO4,CO5**
12		Use Case-1	**CO1,CO2,CO3,CO4,CO5**
13		Use Case-2	**CO1,CO2,CO3,CO4,CO5**
14		Use Case-3	**CO1,CO2,CO3,CO4,CO5**

Learning Resources
Text Books
1. Python Programming: Using Problem Solving Approach, ReemaThareja, 2017, Oxford University Press.
References
1. Core Python Programming, R. NageswaraRao, 2018, Dreamtech press.   2. Programming with python, T R Padmanabhan, 2017, Springer.
e-Resources & other digital material
1. https://nptel.ac.in/courses/106106182   2. https://www.w3schools.com/python/default.asp