

**PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY
KANURU, VIJAYAWADA**

**Department of CSE (DATA SCIENCE)
II B.Tech – I Sem**

Python for Data Science Lab

Course Code:	20ES1358	Year:	II	Semester:	I
Course Category:	Engineering Science Course Lab	Branch:	CSE (Data Science)	Course Type:	Practical
Credits:	1.5	L-T-P:	0-0-3	Prerequisites:	Python Programming
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 various data processing, Data Sampling & distribution techniques for Model building.	L3
CO2	Implement programs as an individual on different tools.	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 the models using various testing and validation techniques.	L4

SYLLABUS

Expt. No.		Mapped CO
1	Perform different operation on Arrays using Numpy	CO1,CO2,CO3,CO4,CO5
2	Implement Pandas Data Frame Object and perform different operations	CO1,CO2,CO3,CO4,CO5
3	Perform Data Cleaning Techniques	CO1,CO2,CO3,CO4,CO5
4	Perform Data Integration Techniques	CO1,CO2,CO3,CO4,CO5
5	Perform Data Transformation Techniques	CO1,CO2,CO3,CO4,CO5
6	Perform Data Reduction Techniques	CO1,CO2,CO3,CO4,CO5
7	Perform Distribution Functions	CO1,CO2,CO3,CO4,CO5
8	Perform Sampling Techniques	CO1,CO2,CO3,CO4,CO5
9	Implement Linear Regression Model	CO1,CO2,CO3,CO4,CO5
10	Implement Logistic Regression Model	CO1,CO2,CO3,CO4,CO5
11	Perform Model Testing and Validation	CO1,CO2,CO3,CO4,CO5
12	Case Study-1	CO1,CO2,CO3,CO4,CO5
13	Case Study-2	CO1,CO2,CO3,CO4,CO5
14	Case Study-3	CO1,CO2,CO3,CO4,CO5
15	Case Study-4	CO1,CO2,CO3,CO4,CO5

Learning Resources
Text Books
1. Python Data Science Handbook: Essential Tools for Working with Data, Jake Vanderplas, 2016,