Semester: 3rd			
Paper code: AIDS253/AIML253/IOT253	**L**	**T/P**	**Credits**
Subject: Foundations of Data Science Lab	**0**	**2**	**1**
Marking Scheme			

1. Teachers Continuous Evaluation: As per university examination norms from time to time
2. End term Examination: As per university examination norms from time to time

INSTRUCTIONS TO EVALUATORS: Maximum Marks: As per university norms

1. This is the practical component of the corresponding theory paper.
2. The practical list shall be notified by the teacher in the first week of the class commencement under the intimation to the office of the HOD/ Institution in which the appear is being offered from the list of practicals below.
3. Instructors can add any other additional experiments over and above the mentioned in the experiment list which they think is important.
4. Atleast 8 experiments must be performed by the students.

Course Objectives:

1.	To analyse different types of data using Python.
2.	To perform statistical analysis and create meaningful data insights.

Course Outcomes:

CO1	Apply data science principles to identify meaningful solutions to actual problems.
CO2	Analyse and create programs based on statistical analysis using different libraries of Python programming language.

CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	3	3	3	3	3	1	1	2	1	1	1	2
CO2	3	3	3	3	3	1	1	2	1	1	1	2

LIST OF EXPERIMENTS:

1. Introduction and installation of Python and Python IDEs for data science (Spyder-Anaconda, Jupyter Notebook etc.)
2. Design a Python program to generate and print a list except for the first 5 elements, where the values are squares of numbers between 1 and 30.
3. Design a Python program to understand the working of loops.
4. Design a Python function to find the Max of three numbers.
5. Design a Python program for creating a random story generator
6. Create a synthetic dataset (.csv/.xlsx) to work upon and design a Python program to read and print that data.
7. Design a Python program using NumPy library functions.
8. Perform Statistics and Data Visualization in python.

9. Design a Python program to implement Linear Regression
10. Design a Python program to create a recommender system

Faculties should also motivate students to make a project on the topics taught in theory and lab.