Panipat Institute of Engineering & Technology
Department of CSE-AI&DS
LESSON PLAN

Subject: Application of Data Science in Industry   **Subject code: OE-CS-AIDS416 A**

Semester: 8th

S.No	Topic	CO Covered	Assignment No.	Teaching Methodology
1	Algebraic view - vectors, matrices	CO1	Assignment No1	Smartboard/ White board
2	product of matrix & vector,	CO1		Smartboard/ White board
3	rank, null space,	CO1		Smartboard/ White board
4	solution of over-determined set of equations	CO1		Smartboard/ White board
5	Pseudo-inverse of matrix	CO1		Smartboard/ White board
6	Geometric view of vectors	CO1		Smartboard/ White board
7	Distance, projections,	CO1		Smartboard/ White board
8	eigenvalue decomposition	CO1		Smartboard/ White board
9	Revision Test	CO1		Smartboard/ White board
10	Descriptive statistics	CO2	Assignment-2	Smartboard/ White board
11	Notion of probability, distributions	CO2		Smartboard/ White board
12	Mean, variance	CO2		Smartboard/ White board
13	Covariance matrix	CO2		Smartboard/ White board
14	Understanding univariate and multivariate normal distributions	CO2		Smartboard/ White board
15	Practice class	CO2		Smartboard/ White board
16	Introduction to hypothesis testing,	CO2		Smartboard/ White board
17	Confidence interval for estimates	CO2		Smartboard/ White board
18	Revision Test	CO2		Smartboard/ White board
19	Typology of data science problems and a solution framework	CO3	Assignment-3	Smartboard/ White board

20	Simple linear regression and verifying assumptions used in linear regression	CO3		Smartboard/ White board
21	Multivariate linear regression	CO3		Smartboard/ White board
22	Model assessment, assessing importance of different variables	CO3		Smartboard/ White board
23	Subset selection,	CO3		Smartboard/ White board
24	Classification using logistic regression Classification using kNN and k-means clustering.	CO3		Smartboard/ White board
25	Revision Test	CO3		Smartboard/ White board
26	Case Study of Walmart supply Chain Management	CO4		Smartboard/ White board
27	Solving Data Analysis Problems using case study of google company	CO4		Smartboard/ White board
28	Case study ofOLAP tool for the Fast food industry	CO4		Smartboard/ White board
29	Revision	CO4		Smartboard/ White board
30	Real-Time Data Streaming with Apache Kafka with Company data set	CO4	Assignment-4	Smartboard/ White board
31	Real-Time Data Processing using Spark Streaming	CO4		Smartboard/ White board
32	FAQs	CO4		Smartboard/ White board
33	Building Automated Data Pipelines with Airflow	CO4		Smartboard/ White board
34	Analytics using PySpark.	CO4		Smartboard/ White board
35	Revision	CO4		Smartboard/ White board