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

Subject: Data Mining & Predictive Modelling   **Subject code:** PE-CS-AIDS-417A

Semester: 7th

S.No	Topic	CO covered	Assignment No.	Teaching Methodology
1	Introduction to Data Mining, concepts of Data mining	C01	1.Define the key concepts of Data Mining. Explore the technologies used in Data Mining.	White Board
2	Technologies used Data Mining Process	Co1	2. Classify Data Mining Systems and discuss their characteristics.	White Board
3	KDD process models, Mining on various kinds of data, Classification of Data Mining Systems	Co1	3. Explain the concept of Similarity Measures in the context of Data Mining.	PPT
4	Application of Data Mining and	Co1	4. Discuss the requirement for Cluster Analysis and various Clustering Methods.	White Board
5	challenges of Data Mining	Co1, C02		White Board
6	Data Mining Techniques: Statistical Perspective on Data Mining	Co2		White Board
7	Similarity Measures, Clustering-Requirement	Co2	1.Explore techniques related to Model Development, including Data Partitioning and Model Selection.	PPT
8	Cluster Analysis, Clustering Methods	C02	2.Discuss the principles and application of Support Vector Machines.	PPT
9	Revision & Q& A		3.Discuss the automation of models for Categorical and Continuous targets.	ppt
			4.Explain the process of comparing and combining models in predictive analytics.	
10	Clustering- Requirement for Cluster Analysis Clustering Methods	C03		White Board
11	Decision Tree- Decision Tree Induction, Attribute Selection Measures	Co3		White Board
12	Tree Pruning. Association Rule Mining: Frequent Item-set Mining using Apriori Algorithm	Co3		White Board
13	Nearest Neighbor Classification: Performance of Nearest Neighbor Classifiers	Co4		PPT

14	Revision & Q& A			GD
15	Model development & techniques Data Partitioning	Co4	1. Introduce the Model Evaluation and Deployment phase in predictive analytics.	White Board
16	Model selection, Model Development Techniques	**Co4**	2.Discuss the importance of Model Validation in the deployment process.	White Board
17	Neural networks	Co5	3. Write down an algorithm for detecting unreachable entries in a LR Parsing Table.	PPT
18	Decision trees	Co3		PPT
19	Logistic regression, Discriminant analysis	Co3		PPT
20	Support vector machine	Co3		White Board
21	Bayesian Networks	Co3		PPT
22	Linear regression	Co2		PPT
23	Cox Regression	Co3		PPT
24	Association rules	Co4	4. Explore Meta Level Modeling in the context of predictive analytics.	White Board
25	Model Evaluation and Deployment Introduction	Co3	5.Discuss the process of updating models and its significance.	White Board
26	Model Validation,	Co3	6. Explain the principles and application of Bayesian Networks. Discuss the role of Linear Regression in predictive modeling.	White Board
27	Rule, Induction Using CHAID	Co2		PPT
28	Automating Models for Categorical and Continuous targets,	Co4		PPT
29	Comparing and Combining Models, Evaluation Charts for Model Comparison	Co3		White Board
30	Meta Level Modeling	Co2		White Board
31	Deploying Model, Assessing Model	Co2		PPT
32	Assessing Model Performance,	Co2		PPT
33	Updating a Model	Co3		PPT
34	Review and Q&A.			GD
35	Review and Q&A.			GD