

Hour	Unit	Topic	Teaching Methodology	Remarks
1	I	What is a Data Warehouse?	Whiteboard	
2	I	A Multidimensional Data Model	Whiteboard	
3	I	Data Warehouse Architecture	Whiteboard	
4	I	Data Warehouse Implementation	Whiteboard	
5	I	From Data Warehousing to Data Mining	Whiteboard	
6	II	What is Data Mining?	Whiteboard	
7	II	Motivating Challenges	Whiteboard	
8	II	The Origins of Data Mining	Whiteboard	
9	II	Data Mining Tasks	Whiteboard	
10	II	Types of Data	Whiteboard	
11	II	Data Quality	Whiteboard	
12	II	Aggregation & Sampling	Whiteboard	
13	II	Dimensionality Reduction	Whiteboard	
14	II	Feature Subset Selection & Feature Creation	Whiteboard	
15	II	Discretization and Binarization	Whiteboard	
16	II	Variable Transformation	Whiteboard	
17	II	Measures of Similarity and Dissimilarity	Whiteboard	
18	III	Classification: Basic Concepts	Whiteboard	
19	III	General Approach to Classification Problems	Whiteboard	
20	III	Decision Tree Induction – Working of Decision Trees	Whiteboard	
21	III	Building a Decision Tree	Whiteboard	
22	III	Attribute Test Conditions	Whiteboard	
23	III	Best Split Measures	Whiteboard	
24	III	Algorithm for Decision Tree Induction	Whiteboard	
25	IV	Model Overfitting: Noise and Sample Issues	Whiteboard	
26	IV	Evaluating Classifier – Holdout, Subsampling	Whiteboard	
27	IV	Cross-Validation and Bootstrap	Whiteboard	
28	IV	Bayes Theorem	Whiteboard	
29	IV	Naïve Bayes Classifier	Whiteboard	

30	V	Association Analysis: Problem Definition	Whiteboard	
31	V	Frequent Itemset Generation	Whiteboard	
32	V	Apriori Principle	Whiteboard	
33	V	Apriori Algorithm	Whiteboard	
34	V	Rule Generation	Whiteboard	
35	V	Compact Representation of Frequent Itemsets	Whiteboard	
36	V	FP-Growth Algorithm	Whiteboard	
37	VI	What is Cluster Analysis?	Whiteboard	
38	VI	Types of Clustering & Types of Clusters	Whiteboard	
39	VI	Basic K-means Algorithm	Whiteboard	
40	VI	K-means: Additional Issues	Whiteboard	
41	VI	Bisecting K-means	Whiteboard	
42	VI	Strengths and Weaknesses of K-means	Whiteboard	
43	VI	Agglomerative Hierarchical Clustering	Whiteboard	
44	VI	DBSCAN Overview	Whiteboard	
45	VI	DBSCAN Algorithm	Whiteboard	
46	VI	Strengths and Weaknesses of DBSCAN	Whiteboard	
47	All	Unit-wise Recap and Integration	Whiteboard	
48	All	Final Review and Q&A	Whiteboard	