

WORK PLAN (Odd Semester: August – November 2025)

Paper Name: Discipline Specific Core Course – Data Mining–I

Course: B.A. with Computer Science as Major Discipline (III Semester)

Teacher Name: Mr. Rajeev Kumar Rai

S. No.	Month	Content
1	August 2025	Unit 1: Introduction to Data Mining, Motivation and Challenges for Data Mining, Types of Data Mining Tasks, Applications of Data Mining, Data Measurements, Data Quality, Supervised vs. Unsupervised Techniques, Unit 2: Data Pre-Processing, Data Aggregation, Sampling
2	September 2025	Dimensionality Reduction, Feature Subset Selection, Feature Creation, Variable Transformation, Unit 3: Cluster Analysis, Basic Concepts of Clustering, Measure of Similarity, Assignment 1, Class Test 1
3	October 2025	Types of Clusters and Clustering Methods, K-Means Algorithm, Measures for Cluster Validation, Determining Optimal Number of Clusters, Unit 4: Association Rule Mining, Transaction Dataset, Frequent Itemset, Support Measure, Rule Generation, Confidence of Association Rule, Apriori Algorithm, Apriori Principle, Assignment 2
4	November 2025	Unit 5: Classification, Naive Bayes Classifier, Nearest Neighbour Classifier, Decision Tree, Overfitting, Confusion Matrix, Evaluation Metrics and Model Evaluation, Class Test 2

Note: Lab Exercises, Assignments, and Class Tests will be covered as per listed topics throughout the session.