

## **UNIT 1 – BASIC DATA MINING TASKS**

1. Introduction to data mining.
2. Data mining vs Knowledge Discovery in Databases (KDD).
3. Data mining tasks.
4. Data mining issues.
5. Data mining metrics.
6. Social implications of data mining.
7. Data mining from database perspective.

## **UNIT 2 – DATA MINING TECHNIQUES**

1. Data mining techniques overview.
2. Statistical perspective of data mining.
3. Similarity measures.
4. Decision trees.
5. Neural networks.
6. Genetic algorithms.
7. Comparison of data mining techniques.

## **UNIT 3 – CLASSIFICATION**

1. Introduction to classification.
2. Statistical based algorithms.
3. Distance based algorithms.
4. Decision tree based algorithms.
5. Neural network based algorithms.
6. Rule based algorithms.
7. Combining classification techniques.

## **UNIT 4 – CLUSTERING**

1. Introduction to clustering.
2. Similarity and distance measures.
3. Outliers.
4. Hierarchical clustering algorithms.
5. Partitional clustering algorithms.
6. Comparison of clustering techniques.

## **UNIT 5 – ASSOCIATION RULES**

1. Introduction to association rules.

2. Large item sets.
3. Basic association rule algorithms.
4. Parallel and distributed algorithms.
5. Incremental association rules.
6. Measuring the quality of rules.
7. Comparing association rule approaches.