3/4 B.Tech - SECOND SEMESTER

IT6L2 **DM LAB** **Credits: 2**

Internal assessment: 25 marks

Lab: 3 Periods/week **Semester end examination: 50 marks**

Objectives:

- To perform data preprocessing operations.
- To implement various Data Mining techniques to understand Data Mining processes.
- To gain familiarity with various stages of KDD for an application.
- To provide Hands on experience on data mining tools.

Outcomes:

Students will be able to

- Perform various operations on data preprocessing.
- Implement association rule mining algorithms.
- Apply different classification techniques.
- Analyze data using clustering techniques.

Exercises:

1. Perform data preprocessing using data mining tool.
2. Perform discretization of data using data mining tool.
3. Apply association rule process on a sample data set using Apriori algorithm.
4. Apply association rule process on a sample data set using FP Growth algorithm.
5. Apply the classification tool process on data set using any decision tree algorithm.
   a) Naive Bayes
   b) Linear Regression
   c) JRip
   d) ZeroR
   e) id3
   f) J48
6. Apply Clustering process to a sample data set using k-means.
7. Apply Clustering process to a sample data set using k-medoids.
8. A small case study involving all stages of KDD. (Datasets are available online like UCI Repository etc.)

Reference Book:

1. Data Mining for the Masses by Dr.Mathewworth.

E-Learning Resources:

1.www.cs.waikato-ac.wz/ml/weka

2.http://rapid-i.com