



Course Name: Data Mining and Algorithms

(UG/PG): PG

Number of Credits: 3

Level: 4

Learning Objective(s): Data warehousing and data mining are the essential components of decision support systems for the modern day industry and business. The objective of this course is to make the students aware of Data Warehousing tools and techniques for query optimization of Datawarehouse and Data Mining Algorithms. The course will cover development of mining algorithm using R programming.

Pedagogy:

Lectures
Class work discussion
Case studies
Dimension Models Creation
Debates and Discussions

Pre-learning: Relational Database Management Systems, R Programming

Course Outline:

Sr.No.	Topic	Hours
1	Introduction to DWDM	3
2	Preprocessing : Data cleaning, removal of noisy words, data validation	4
3	Data mining -concepts, applications, algorithms	3
4	Keyword extraction, similarity, distance matrix, data representation	4
5	Clustering Algorithms: K mean, Nearest neighbor, Hierarchical algorithms. Comparison of algorithms	6
6	classification: Statistical Techniques, applications and implementations	6
7	Prediction: techniques and applications	4
8	Applications in BI	3
9	Data Ware housing – concepts, applications	4

10	R-programming tools for Data mining	2
11	Implementation of DM algorithms using R-programming	3
12	Data visualizations and analysis using R-programming	3
	Total	45

Books Recommended:

1. Data Warehousing by BPB publications
2. Data Warehousing By SINHA,AMITESH
3. Data Mining Introductory and Advance Topics, By DUNHAM, MARGARET H.
4. Data Mining Methods and Techniques, By ALI ,ABM.SHAWKA
5. DATA Mining Concepts and Techniques, By HAN,JIawei / KAMBER,MICHELINE
6. DataBase Management Systems By Raghu Ramakrishna

Suggested Evaluation Methods:

Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered

Name of Member					
Designation					
Org. / Inst.					
Signature					

Name of the Expert:

Signature:

Date:

