

Course Code	Course Name	Hours per Week			Total	Total
		L	T	P	Hrs.	Credits
CS5CD01	Data Warehousing and Mining	2	0	0	2	2

UNIT-I

Introduction

Data Warehousing: Need for Data Warehousing, The Building Blocks of Data Warehouse, Trends in Data Warehousing, Planning and Project Management, Architecture and Infrastructure, Role of Meta Data.,

UNIT-II

Business Analysis

Dimensional Modelling, Dimensional Modelling Advanced, ETL, Data Quality, OLAP in the Data Warehouse, Data Warehousing and the Web.

UNIT-III

Data Mining

Introduction – Data, Types of Data, Data Mining Functionalities, Interestingness of Patterns, Classification of Data Mining Systems, Data Mining Task Primitives, Integration of a Data Mining System with a Data Warehouse, Issues, Data Preprocessing.

UNIT-IV

Algorithms

Association Rule Mining Algorithms, Classification Algorithms, Clustering Algorithms, Mining Streams, Time Series and Sequence Data: Mining Data Streams, Mining Time-Series Data, Mining Sequence Patterns in Transactional Databases, Mining Sequence Patterns in Biological Data, Graph Mining, Social Network Analysis and Multirelational Data Mining:

UNIT-V

Web Mining and Applications

Mining Object, Spatial, Multimedia, Text and Web Data: Multidimensional Analysis and Descriptive Mining of Complex Data Objects, Spatial Data Mining, Multimedia Data Mining, Text Mining, Mining the World Wide Web.

Applications and Trends in Data Mining: Data Mining Applications, Data Mining System Products and Research Prototypes, Additional Themes on Data Mining and Social Impacts of Data Mining.

TEXT BOOKS

1. Data Warehousing Fundamentals, A Comprehensive Guide for IT Professionals, Paulraj Ponniah,
John Wiley & Sons.
2. A. Berson, S.J. Smith, “Data Warehousing, Data Mining & OLAP”, Tata McGrawill.
3. J Han, M. Kamber Band J. Pei, “Data Mining Concepts and Techniques”, Elsevier India.
4. Alex Berson and Stephen J. Smith, “Data Warehousing, Data Mining & OLAP”, Tata McGraw Hill
Edition, Tenth Reprint.

5. Jiawei Han and Micheline Kamber, "Data Mining Concepts and Techniques", Second Edition, Elsevier.

REFERENCES

1. Introduction To Data Mining, Pang-Ning Tan, Michael Steinbach and Vipin Kumar, Person Education.
2. Insight into Data mining Theory and Practice, K.P. Soman, Shyam Diwakar and V. Ajay Easter Economy Edition, Prentice Hall of India.
3. Introduction to Data Mining with Case Studies, Easter Economy Edition, G. K. Gupta, Prentice Hall of India.
4. Data Mining Methods and Models, Daniel T.Larose, Wile-Interscience.
5. Pattern Recognition Techniques and Applications, Rajjan Singhal, Oxford University Press.
6. Data mining Applications with R, Zhao Y., Cen Y., Elsevier India.