ELECTIVE DATA MINING AND DATA WAREHOUSING

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
III		Elective - I	5	75	5	75	0	0	3

COURSE OBJECTIVE

➢ To enable the student to learn the Concepts Of Data Warehouse And Data Mining.
➢ Be Acquainted With The Tools And Techniques Used For Knowledge Discovery In Databases.

COURSE OUTCOME

Successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To learn the fundamentals of data warehousing to build	**K1**
CO2	To study business analysis	**K2**
CO3	To understand the Data Editing Data Pre-Processing and Characterization	**K3**
CO4	To understand the fundamental concepts of Association rule mining and classification	**K4**
CO5	To have an introductory knowledge about the Clustering techniques	**K4**

Knowledge Level – K1-Remember, K2- Understand, K3-Apply, K4-Analyze

MAPPING WITH PROGRAMME OUTCOME

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	S	S
CO2	M	S	M	S	S	M
CO3	S	S	M	L	S	S
CO4	S	M	S	M	S	L
CO5	S	M	S	M	M	S

S- Strong   **M-Medium**   **L-Low**

SYLLABUS

UNIT I -DATA WAREHOUSING   14 Hrs

Data warehousing Components –Building a Data warehouse –– Mapping the Data Warehouse to a Multiprocessor Architecture – DBMS Schemas for Decision Support – Data Extraction, Cleanup, and Transformation Tools – Metadata.

UNIT II -BUSINESS ANALYSIS   16 Hrs

Reporting and Query tools and Applications – Tool Categories – The Need for Applications – Cognos Impromptu – Online Analytical Processing (OLAP) – Need – Multidimensional Data Model – OLAP Guidelines – Multidimensional versus Multi relational OLAP – Categories of Tools – OLAP Tools and the Internet.

UNIT III- DATA EDITING DATA PRE-PROCESSING AND CHARACTERIZATION 17 Hrs

Data Cleaning - Data Integration and Transformation - Data Reduction -

Data Mining Query Language – Generalization – Summarization – Association Rule Mining

UNIT IV -ASSOCIATION RULE MINING AND CLASSIFICATION   14 Hrs

Mining Frequent Patterns, Associations and Correlations – Mining Methods – Mining various Kinds of Association Rules – Correlation Analysis – Constraint Based Association Mining – Classification and Prediction – Basic Concepts – Decision Tree Induction – Bayesian Classification – Rule Based Classification – Classification by Back propagation – Support Vector Machines – Associative Classification – Lazy Learners – Other Classification Methods – Prediction.

UNIT V -CLUSTERING AND TRENDS IN DATA MINING   14 Hrs

Cluster Analysis – Types of Data – Categorization of Major Clustering Methods – K–means–

Partitioning Methods – Hierarchical Methods – Density-Based Methods –Grid Based Methods – Model- Based Clustering Methods – Clustering High Dimensional Data – Constraint – Based Cluster Analysis – Outlier Analysis – Data Mining Applications .

Distribution of Marks: Theory 80% and Applications: 20%

TEXT BOOKS

S.No	Authors	Title	Publishers	Year of Publication
1	Alex Berson	Data Warehousing,Data Mining and OLAP	Thieteenth Reprint	2008
2	Jiawei Han and Micheline Kamber	Data mining concepts and Techniques	Third Edition Elsevier	2012

REFERENCE BOOKS

S.No	Authors	Titl e	Publishers	Year of Publicati on
1	Parteek Bhatia	Data Mining and Data Warehousing: Principles and Practical Techniques	Cambridg e Universit y Press	2019
2	Jiawei Han Micheline Kamber Jian Pei	Data Mining: Concepts and Techniques	Morgan Kaufman n	2011
3	S. K. Mourya	Data Mining and Data Warehousing	Narosa Publishi ng House,	2013
4	Paulraj Ponniah	Data Warehousin g Fundament als	Library of Congress Cataloging- in- Publication	2008
5	Jiawei Han	Data Mining: Concepts and Techniques	Elesivier	2000
6	John Wang Montcla i r	Data Warehousing and Mining: Concepts, Methodologies, Tools, and Applications	Information Science Reference,	2008

7	Nic Li, David Taniar	Integrations of Data Warehousing, Data Mining and Database Technologies	IGI Globa	2011
8	**sam Anahory**,Dennis Murray,	Data Warehousing in the Real World	Pearson Education	1997

WEB RESOURCES

https://www.tutorialspoint.com/ dwh/index.htm
https://www.javatpoint.com/data
-warehouse

TEACHING METHODOLOGY

- o Class room teaching.
- o Group discussions
- o Seminars
- o Demo using systems
- o Chart/Assignment
- o Smart Class room

SYLLABUS DESIGNER

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