**IT1101 DATA WAREHOUSING AND DATA**  
**MINING**  
  
**Total contact hours : 45**

**UNIT I-DATA (9hours)**  
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 (9hours)**  
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 Multirelational OLAP – Categories of Tools –  
OLAP Tools and the Internet.

**UNIT III-DATA MINING (9hours)**  
  
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-ASSOCIATION RULE MINING AND CLASSIFICATION**  
**(9hours)**

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  
MethodsPrediction.

**UNIT V-CLUSTERING AND TRENDS IN DATA MINING (9 hours)**  
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.

**TEXTBOOKS**  
1. Alex Berson and Stephen J. Smith, ― *Data Warehousing, Data Mining &*  
*OLAP*‖, Tata McGraw – Hill Edition, Thirteenth Reprint 2008.  
2. Jiawei Han and MichelineKamber, ―*Data Mining Concepts and*  
*Techniques*‖, Third Edition, Elsevier, 2012.  
**REFERENCES**  
1. Pang-Ning Tan, Michael Steinbach and Vipin Kumar, ― *Introduction To*  
*Data Mining*‖, Person Education, 2007.  
2. K.P. Soman, ShyamDiwakar and V. Ajay ―, *Insight into Data mining*  
*Theory and Practice*‖, Easter Economy Edition, Prentice Hall of India,  
2006.  
3. G. K. Gupta, ― *Introduction to Data Mining with Case Studies*‖, Easter  
Economy Edition, Prentice Hall of India, 2006.  
4. Daniel T.Larose, ―*Data Mining Methods and Models*‖, WileyInterscience,