Course Title : Data Mining &Warehousing			
Course Code: P18CS554	**Semester : 5**	**L:T:P - 2:2:0**	**Credits: 3**
Contact Period : Lecture :52 Hr, Exam: 3Hr		**Weightage :CIE:50% SEE:50%**	

Course Content

Unit-1

Data warehousing and online analytical processing: Data warehousing: Basic concepts, Data warehouse modeling: Data cube and OLAP, Data warehouse design and usage, Data warehouse implementation, Data generalization by attribute-oriented induction.
Self study component : Three Tier Data warehouse architecture

10 Hours

Unit-2

Introduction and Data Preprocessing :Why data mining, What is data mining, What kinds of data can be mined, What kinds of patterns can be mined, Which Technologies Are used, Which kinds of Applications are targeted. Data Preprocessing: An overview, Data cleaning, Data integration, Data reduction, Data transformation and data discretization.
Self study component :Major issues in data mining

12 Hours

Unit-3

Classification: Basic Concepts: Basic Concepts, Decision tree induction, Bays Classification Methods, Rule-Based classification, Model evaluation and selection.
Self study component :Techniques to improve classification accuracy

10 Hours

Unit-4

Mining Frequent Patterns, Associations, and Correlations: Basic Concepts and Methods: Basic Concepts, Frequent Itemset Mining Methods, Which Patterns Are Interesting?—Pattern Evaluation Methods, Pattern Mining in Multilevel, Multidimensional Space.
Self study component :Constraint-Based Frequent Pattern Mining

10 Hours

Unit-5

Cluster Analysis: Basic concepts and methods: Cluster Analysis, Partitioning methods, Hierarchical Methods, Density-based methods, Grid-Based Methods.
Self study component :Evaluation of clustering.

10 Hours

Text Book:

1. Jiawei Han, MichelineKamber, Jian Pei: Data Mining Concepts and Techniques, ELSEVIER (MK) 3rd edition 2012.

Reference Books:

1. Arun K Pujari: Data Mining Techniques 2nd Edition, Universities Press, 2009.
2. Jiawei Han and MichelineKamber: Data Mining - Concepts and Techniques, 2nd Edition, Morgan Kaufmann Publisher, 2006.
3. Alex Berson and Stephen J. Smith: Data Warehousing, Data Mining, and OLAP Computing, McGrawHill Publisher, 1997.
4. Insight into Data Mining-Theory and Practice-K.P.Soman, ShyamDiwakar, V.Ajay, PHI, 2006.

Course Outcomes : The students shall able to:

1. **Analyze** different data models used in data warehouse.
2. **Apply** different preprocessing techniques for different attributes.
3. **Determine** frequent item set using association rules.
4. **Apply** different classification techniques to classify the given data set.
5. **Analyze** different clustering techniques.

CO-PO mapping

Semester: 5th		**Course code : P18CS554**					**Title : Data Mining &Warehousing**								
CO	**Statement**	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**	**PS 01**	**PS 02**
CO1	**Analyze** different data models used in data warehouse.	3	2			1									2
CO2	**Apply** different preprocessing techniques for different attributes.	3	2	2		1									2
CO3	**Determine** frequent item set using association rules.	3	2	2		1									2
CO4	**Apply** different classification techniques to classify the given data set.	3	2	2		1									2
CO5	**Analyze** different clustering techniques.	3	2	2		1									2
		3	**2**	**2**		**1**									**2**