

# CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

Course Designers		
Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
Mr.G.Muruganandam, Group Project Manager, HCL Technologies, Chennai	Dr.Muthu, Professor, Loyola College, Chennai	Ms.M.R.Sudha, Assistant Professor
Mr.M. Hemachandar, Tech Lead, Wipro Limited, Chennai	Dr.Vincent, Associate Professor, VIT	

Course Code	PAD21D03T	Course Name	DATA MINING AND WAREHOUSING	Course Category	D	Discipline Specific Elective	L	T	P	C
							4	0	0	4

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Applications	Data Book / Codes/Standards	Nil		

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning	Program Learning Outcomes (PLO)
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CLR-1 :	Gain knowledge about Data mining and Knowledge Discovery Process	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLR-2 :	Practice the Data mining Tools to apply Data mining algorithms	Le	Ex	Ex	Dis	Crit	Pro	Ana	Res	Te	Sci	Re	Sel	Mu	Eth	Co	IC	Le	Lif
CLR-3 :	Understand and Apply Association rule mining techniques	vel	pe	pe	cipl	ical	blem	lytic	e	am	ent	flex	f-D	ltic	ical	m	T	ad	e
CLR-4 :	Understand and Apply various Classification algorithms	of	cte	cte	inary	Thi	Sol	Rea	arch	Wo	ific	ctiv	irect	ult	Re	mu	Ski	ers	Lo
CLR-5 :	Gain knowledge on the concepts of Cluster and Outlier Analysis	Thi	d	d	Kn	ng	vin	son	S	k	Re	e	ed	ura	ason	nity	lls	hip	ng
CLR-6 :	Gain knowledge about Data Warehouse manager, Query manager and DW Schema	(B	Pr	Att	ow	m)	nc	me	il	l	son	Thi	Le	Comp	ing	En		Ski	
CLR-6 :	Understand the partitioning and backup technologies	oo	ie	nt	ed		y	(%)				ng	nc	e		ga		lls	
Course Learning Outcomes (CLO):	At the end of this course, learners will be able to:																		
CLO-1 :	Understand the Data mining concepts and KDD process	2	85	80	L	H	H	H	H	M	-	H	M	H	-	H	-	-	-
CLO-2 :	Understand and Apply Association rule mining and classification techniques in real world scenario	3	85	80	L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-3 :	Gain knowledge about Cluster & Outlier Analysis	3	85	80	L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-4 :	Understand the importance of applying Data mining concepts in different domains	3	85	80	L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-5 :	Gain knowledge on Data warehouse and different types of Schema concepts	3	85	80	L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-6 :	Understand the partitioning and backup technologies	3	85	80	L	H	H	H	H	-	-	M	M	L	-	H	-	-	-

Duration (hour)	12	12	12	12	12
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S-1	SLO-1	Why Data mining? What is Data mining?	Visualization techniques	Introduction to data warehouse architecture	Data warehouse partitioning and needs	Introduction of data marts
S-2	SLO-1	Kinds of data, information and knowledge	Measures Likelihood & distance	Process architecture: Load manager	Horizontal partitioning	Estimation of design cost
S-3	SLO-1	Data mining tools and applications	Neural Networks, Decision tree technique	Data warehouse manager, Query manager	Vertical partitioning Comparison of partitioning	Meta data , Explanation of Data mart
S-4	SLO-1	Explain data, types of data and its technique	Constructing Decision tree for real time applications	Query manager	Explain partitioning	meta data by role play
S-5	SLO-1	Explain data, information and Knowledge through real time examples using ppt.	ID3 algorithm	Data warehouse Objects	Hardware partitioning	Backup
S-6	SLO-1	Knowledge Discovery in Database	Genetic algorithm	Fact table, Dimension table	Software partitioning	Types of Backup
S-7	SLO-1	Data mining architecture	Crossover, mutation techniques	Data warehouse users	Types of Software partitioning Round robin Partitioning Vertical partitioning	Hot and Cold backup
S-8	SLO-1	Data mining operations and Issues in Data mining	What is neural network? Real- life applications	Roles and Responsibility of Data ware house	Horizontal partitioning, partitioning dimensions,	Sure west online backup
S-9	SLO-1	Demonstration on data mining algorithms	Demonstration of Neural Networks Decision tree and genetic algorithms	Compare and explain OLTP and OLAP	Demonstration of partitioning And its types	Backup the data warehouse
S-10	SLO-1	Anatomy of data mining	Clustering, Application of clustering clustering.	Data warehouse schema, and its types- Star Schema and its characteristics	Design fact tables and its type- Star Design – One Fact or Multiple Facts Drill across Joining facts	Disaster recovery procedure and Various recovery models
S-11	SLO-1	Data mining task- Descriptive and Classification Functions	K- means Clustering Algorithm	Snowflake schema and its characteristics	Fact table surrogate keys Factless Facts	Strategies and Best practices of backup and recovery model.
S-12	SLO-1	Learning and types	Association Rule Mining and Apriori algorithm	Fact constellation schema and its characteristics with examples	Design summary table	Testing and types

Learning Resources	1.Prabhu S, Venkatesan N (2006), Data Mining & Warehousing– New Age International – First Edition, New Delhi. 2.Sam Anahory, Dennis Murray (2004), Data warehousing in real world – Pearson Education, New Delhi	1. Pieter Adriaans, Dolf Zantinge (2005), Data Mining – Pearson education, New Delhi
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		2. Alex Berson, Stephen J Smith (2004), <i>Data Warehousing, Data mining &amp; OLAP</i> – Tata McGraw Hill Publications, New Delhi.
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Learning Assessment											
Level	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4 (10%)#			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	40%	-	40%	-	40%	-	40%	-	40%	-
	Understand										
Level 2	Apply	40%	-	40%	-	40%	-	40%	-	40%	-
	Analyze										
Level 3	Evaluate	20%	-	20%	-	20%	-	20%	-	20%	-
	Create										
	Total	100 %		100 %		100 %		100 %		100 %	

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