Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
CPCL801	**Data Warehousing and Mining Lab**	--	--	2	--	--	1	1
		Examination Scheme						
		ISE		**ESE**				**Total**
				Practical		**Oral**		
		40		**-**		**20**		**60**

Pre-requisite Course Codes	CPC801(Data Warehousing and Mining)
At end of successful completion of this course, student will be able to	

Course Outcomes	CPC801.1	Create dimensional modeling and implement dimension table, fact table and OLAP operations.
	CPC801.2	Develop Classification, Clustering and Association Mining algorithms using languages any like Java, C#.
	CPC801.3	Use WEKA tool to implement Classification, Clustering and Association Mining.
	CPC801.5	Use R tool to implement Clustering/Association Rule/Classification Algorithms.
	CPC801.4	Observe the features of any one BI tool.

Exp. No.	Experiment Details	Ref.	Marks
1	One case study given to a group of 3 /4 students, of a data mart/ data warehouse. a. Write Detail Statement Problem and creation of dimensional modeling(creation star and snowflake schema) b. Implementation of all dimension table and fact table c. Implementation of OLAP operations.	1,2,3,4,7	5
2	Implementation of classifier like Decision tree, Naïve Bayes, Random Forest using any languages like Java	1,5,8	5
3	Use WEKA to implement like Decision tree, Naïve Bayes, Random Forest.	1,5	5
4	Implementation of clustering algorithm like K-means, K-Medoids, Agglomerative, Divisive using languages any like Java, C# , etc.	1,5,8	5
5	Use WEKA to implement the following Clustering Algorithms – K-means, Agglomerative, and Divisive.	1,5	5
6	Implementation Association Mining like Apriori, FPM using languages like Java, C#, etc. and using WEKA Tool	1,5,9	5
7	Use R tool to implement Clustering/Association Rule/	1,5,9	5

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	Classification Algorithms.		
8	Detailed study of any one BI tool like Oracle BI, SPSS, Clementine, and XLMiner etc. (paper Assignment)	1,6	**5**
		Total Marks	**40**

References:

[1] Han, Kamber and Pei "*Data Mining Concepts and Techniques*", Morgan Kaufmann 3rd Edition

[2] ReemaTheraja "*Data warehousing*", Oxford University Press.

[3] PaulrajPonniah, "*Data Warehousing: Fundamentals for IT Professionals*", Wiley India

[4] P.S.Deshpande, "*SQL & PL/SQL for Oracle 11 g*", dreamtech PRESS.

[5] Margaret H. Dunham, "*Data Mining Introductory and Advanced Topics*", Pearson Education

[6] Randall Matignon, "*Data Mining using SAS enterprise miner* ", Wiley Student edition.

[7] Alex Berson , S. J. Smith, "*Data Warehousing, Data Mining & OLAP*" , McGraw Hill.

[8] VikramPudi&Radha Krishna, "*Data Mining*", Oxford Higher Education

[9] Daniel Larose, "*Data Mining Methods and Models*", Wiley India.

[10] J. Millman and A. Grabel, "*Microelectronics*", Tata McGraw Hill, 2nd Edition.

[11] Jan M. Rabaey, AnanthaChandrakasan and Borivoje Nikolic, "*Digital Integrated Circuits: A Design Perspective*", Pearson Education, 2nd Edition.