



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	
CPEL8035	Elective-III Big Data Analytics Lab	--	--	2	--	--	1	1	
		Examination Scheme							
		ISE		ESE		Total			
				Practical	Oral				
		40	--	20	60				

Pre-requisite Course Codes	CPE8035(Big Data Analytics)	
At end of successful completion of this course, student will be able to		
Course Outcomes	CO1	Identify challenges in big data management and inadequacy of existing technology to analyze big data.
	CO2	Apply scalable algorithms based on Hadoop and Map Reduce to perform Big Data Analytics..
	CO3	Apply NoSQL tools to solve big data problems.
	CO4	Use stream data model to provide real time analysis of big data.
	CO5	Discover information from social network graphs.

Exp. No.	Experiment Details	Ref.	Marks
1	Study of Hadoop Ecosystem and execute word count program.	1,2	5
2	Mapreduce program on Hadoop.	1,2	5
3	Programming in NoSQL.	1,2,3	5
4	Use Pig scripting to solve Big Data problem.	1,4,5	5
5	Implement a Frequent Itemset algorithm using Map Reduce.	1,2,3	5
6	Implement a Clustering algorithm using Map Reduce.	1,2,3	5
7	Implement a Data streaming algorithm using Map Reduce.	1,2,3	5
8	Mini Project. One real life large data application to be implemented (Use standard Datasets available on the web)	1,2,3	5
Total Marks			40

References:

- [1] AnandRajaraman and Jeff Ullman "Mining of Massive Datasets", Cambridge University Press,
- [2] Alex Holmes "Hadoop in Practice", Manning Press, Dreamtech Press.
- [3] Dan McCreary and Ann Kelly "Making Sense of NoSQL" – A guide for managers



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and the rest of us, Manning Press.

[4] Bill Franks , “Taming The Big Data Tidal Wave: Finding Opportunities In Huge Data Streams With Advanced Analytics”, Wiley

[5] Chuck Lam, “Hadoop in Action”, Dreamtech Press