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
ITL802	Big Data Analytics Lab	--	--	2	--	--	1	1
		Examination Scheme						
		ISE		ESE			Total	
				Practical		Oral		
		40		-		20	60	

Pre-requisite Course Codes	IT34 (Object Oriented Programming)
	TEITC604 (Data Mining and Business Intelligence)
	ITC802(Big Data Analytics)
After successful completion of the course, student will be able to:	
Course Outcomes	CO1	Demonstrate use of Map Reduce algorithms.
	CO2	Choose appropriate NO SQL Database in big data analytics.
	CO3	Apply map-reduce on Big data algorithms like Frequent Item set algorithm, Clustering, Data streaming algorithm.
	CO4	Make use of software tools like Pig, Hive, Hbase etc for big data analytics.
	CO5	Create an application of big data analytics like recommender systems, social media applications etc.

Exp. No.	Experiment Details	Ref.	Marks
1	Installation of Hadoop and execution of HDFS commands	1,2	**5**
2	Implementing simple algorithms in Map- Reduce on Hadoop	1,2	**5**
3	Installation of any No SQL database and solving any case study of Big data using it.	3	**5**

4	Demonstrate Matrix multiplication, Aggregates, joins, sorting, searching etc on Hadoop.	1,2	**5**
5	Make use of different software tools like Pig, Hive, Hbase etc for big data analytics.	1,2	**5**
6	Implementing any one Clustering algorithm using Map-Reduce	1,2	**5**
7	Implementing any one data streaming algorithm using Map-Reduce	1,2	**5**
8	Mini Project: One real life large data application to be implemented (Use standard Datasets available on the web) a) Twitter data analysis b) Fraud Detection c) Text Mining etc.	1,2,3	**5**
	Total Marks		40

References:
1. Anand Rajaraman 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 No SQL*" – A guide for managers and the rest of us, Manning Press.