PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS &
SCIENCE
Autonomous
Siddhartha Nagar, Vijayawada-520010
Re-accredited at 'A+'by the NAAC

Offered to: M.Sc. (Computer Science)

CourseName	Big Data Analytics	L	T	P	C	CIA	SEE	TM
CourseCode	22CS4L1	0	0	6	3	30	70	100
Year of Introduction: 2022	**Year of Offering:** 2022	**Year of Revision**: Nil		**Percentage of Revision:**				
L-Lecture, T-Tutorial, **P**-Practical, **C**-Credits, **CIA**-InternalMarks, **SEE**-ExternalMarks, **TM**-TotalMarks								

Course Description and Purpose: This laboratory course focuses on hands-on experience with Hadoop installations and commands, implementing word count in Hadoop, Pig installations and commands, MongoDB tasks and operations, including bulk documents, arrays, and MapReduce, as well as Spark installation and operations, including RDDs, data frames, and Spark SQL.

Course Objectives: This laboratory course aimed to implement Hadoop Installations, Hadoop Commands,Word Count in Hadoop, Pig Installation, Pig Commands, MongoDB, MongoDB Commands, Tasks On Mongodb, Bulk Documents in Mongodb, Arrays in Mongodb, Map Reduce in Mongodb, Aggregate Functions in Mongodb, Mongo Import & Export and Spark Installation, Operations of Rdd, Working With Data Frames, Spark SQL Operations.

Course Outcomes:

Upon successful completion of the course, the student will be able to:

CO1: Demonstrate foundational Hadoop installations, basic Hadoop commands and implement the Word

Count program.

CO2: Illustrating a proficiency in setting up Pig for data processing.

CO3: Understanding of arrays in MongoDB,explaining their basic use and functionality.

CO4: Design and implement advanced tasks in MongoDB

CO5: Apply Spark SQL operations.

CO-PO MATRIX							
COURSE CODE	**CO-PO**	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**
	CO1	M				M	
	CO2	M				M	
	CO3	M				M	
	CO4	H		H			
	CO5	H		H			

1.Hadoop Installation Steps. (CO1,L3)

2. Hadoop Commands. (CO1,L3)

3. Word Count Program in Hadoop. (CO2,L1)

4. Pig Installation Steps. (CO2,L3)

5. Pig Commands. (CO3,L3)

6. Introduction ToMongodb. (CO3,BTL1)

7. Mongodb Commands. (CO3,BTL3)

8. Tasks on Mongodb. (CO4,BTL3)

9. Creating Bulk Documents InMongodb. (CO4,L6)

10. Arrays in Mongodb. (CO3,L1)

11. Map Reduce in Mongodb. (CO4,L3)

12. Aggregate Functions in Mongodb. (CO4,L3)

13. Mongo Import. (CO4,L3)

14. Mongo Export. (CO4,L3)

15. Spark Installation. (CO5,L3)

16. Operations of Rdd. (CO5,L3)

17. Working With Data Frames. (CO5,L3)

18. Spark Sql Operations. (CO5,L3)

Question Paper Pattern for Practical Course

SEE (LAB) Model Question Paper

22CS4L : Big Data Analytics

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Max. Marks: 70   **Max. Time: 3Hrs**

Pass. Min: 28

(A)	**Evaluation Procedure**		**70 Marks**
	I	Experiments (Exam & Execution)	50 Marks
	II	Viva	**10 Marks**
	III	Record	**10 Marks**
(B)	**CONTINUOUS ASSESMENT:**		**30 MARKS**

30 marks for the continuous assessment (Day to day work in the laboratory shall be evaluated for 30 marks by the concerned laboratory teacher based on the regularity/ record/viva). Laboratory teachers are mandated to ensure that every student completes 80%-90% of the lab assessments.

TOTAL: (A)+(B) =   **100 MARKS**