		L	T	P	Cr.
B.Tech. (VI Sem.)	**20CS62- DATA ANALYTICS AND VISUALIZATION LAB**	0	0	3	1.5

Pre-requisite : Object Oriented programming & Database Management Systems

Course Educational Objective: The Objective of the course is to provide practical, foundation level training that enables immediate and effective participation in Big Data and other Analytics projects using Hadoop and Data Visualization using Tableau.

Course Outcomes (CO): *At the end of this course, the student will be able to:*

CO1: Demonstrate the installation of Bigdata analytic tools**. (Understand – L2)**

CO2: Apply data modelling techniques to large data sets. **(Apply – L3)**

CO3: Conduct exploratory data analysis using visualization. **(Understand – L2)**

CO 4: Improve individual / teamwork skills, communication & report writing skills with ethical values.

List of Experiments

1. Refreshing Linux Commands and Installation of Hadoop
2. Implementation of Run a basic Word Count Map Reduce program
3. Implementation of Matrix Multiplication with Hadoop Map Reduce.
4. Implementation of Weather mining by taking weather data set using Map Reduce.
5. Installation of Hive along with practice examples.
6. Installation of Sqoop along with Practice examples.
7. Downloading and installing Tableau Understanding about importing data, saving, opening, and sharing workbooks.
8. Data Preparation with Tableau
9. Charts: Bar Charts, Legends, Filters, and Hierarchies, Step Charts, Line Charts.
10. Maps: Symbol Maps, Filled Maps, Density Maps, Maps with Pie Charts
11. Interactive Dashboards

TEXTBOOKS:

1. Seema Acharya, Subhasini Chellappan, **"Big Data Analytics"** Wiley 2015
2. Alexander Loth, "**Visual Analytics with Tableau**", ISBN: 978-1-119-56020-3, Wiley 2019

REFERENCES:

1. Tom White, "**Hadoop: The Definitive Guide**", Third Edit on, O'reily Media, 2012
2. Michael Berthold, David J. Hand, **"Intelligent Data Analysis**" Springer, 2007.
3. Jay Liebowitz, "**Big Data and Business Analytics**" Auerbach Publications, CRC press (2013).
4. AnandRajaraman and Jefrey David Ulman, "**Mining of Massive Datasets**", Cambridge University Press,2012.
5. ArvindSathi,. "BigDataAnalytics: **Disruptive Technologies for Changing the Game**", MC Press, 2012, 2001.
6. http://nptel.ac.in/courses/106104135/48
7. http://nptel.ac.in/courses/110106064/