Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NCSC518	**Data Analytics Lab**	0	0	3	1.5

Course Objective
This course is intended to provide the students the practical knowledge of implementing the algorithms and/or techniques that they have learned and understand from their theoretical study.
Learning Outcomes
Students will be learning building project on Big-data Analytics using Python and/or R apart from getting concepts on Hadoop and MapReduce.

Unit No.	Topics to be Covered	Practical Hours	Learning Outcome
1	Descriptive Statistics and statistical measures for real world data sets.	6	Understanding the different statistical measures and their need.
2	Data Visualization techniques	6	Understanding graphical representation of data set with corresponding statistics.
3	Bayes and Naïve Bayes techniques.	3	Understanding the role of probabilistic techniques in data analytics.
4	Linear and Non-linear regression techniques.	3	Understanding classification of linearly and non-linearly separable data points.
5	Data Classification Algorithms using Neural Network algorithms	6	Understanding data classifications by the use of neural networks.
6	Linear Discriminant Analysis and Quadratic Discriminant Analysis.	3	Understanding different types of discriminant algorithms and their role.

7	Implementation of SVM, Ensemble methods, Unsupervised learning Algorithms, Clustering and Association rule mining.	9	Understanding the role of these algorithms and their use in data analytics.
8	Scalable Computing: Hadoop and MapReduce.	6	Understanding the concept of scalable computing in platform of Hadoop and MapReduce.
Total		**42**	

Reference Books:

1. Data Analytics- Anil Maheswari, McGraw-Hill.
2. Big Data Analytics- SeemaAchary, Wiley.
3. Machine Learning with Big Data- Kareem Alkaseer
4. Data Analytics with Hadoop and MapReduce- Benjamin Bengfort and Jenny Kim, O'Relly.