Course code: CS-522 T   **Course Title: B1. Basic Data Science**
Total Credit: 2   Marks: 50 (UA: 40 + IA: 10)
Periods: 3 per week (50 Minutes each)

Prerequisites : None

Learning Objectives

- Data Science is a fast-growing interdisciplinary field, focusing on the analysis of data to extract knowledge and insight.
- To introduce students to the collection, Preparation, analysis, modelling and visualization of data, covering both conceptual and practical issues.
- Examples and case studies from diverse fields will be presented, and hands-on use of statistical and data manipulation software will be included

Learning Outcomes
After learning the course the students should be able to:

- Recognize various disciplines that contribute to a successful data science effort.
- Understand the processes of data science - identifying the problem to be solved,
- data collection, preparation, modelling, evaluation and visualization.
- Be aware of the challenges that arise in data sciences.
- Develop and appreciate various techniques for data modelling and mining.

Course Outline :
Unit – 1**Introduction to Business Analytics** Why Analytics? Business Analytics: The Science of Data-Driven Decision Making, Descriptive Analytics, Predictive Analytics, Prescriptive Analytics, Descriptive, Predictive and Prescriptive, Analytics Techniques.

Unit – **2** Big Data Analytics, Web and Social Media Analytics, Machine Learning Algorithms, Framework for Data-Driven Decision Making, Analytics Capability Building, Roadmap for Analytics Capability Building, Challenges in Data-Driven Decision Making and Future.

Unit – **3** Descriptive Analytics, Introduction to Descriptive Analytics, Data Types and Scales, Types of Data Measurement Scales.

Unit – **4** Population and Sample, Percentile, Decile and Quartile, Measures of Variation, Measures of Shape − Skewness and Kurtosis

Unit - 5 Test and Tutorial

Reference Books:-
1. Dinesh Kumar, Business Analytics, Wiley IndiaBusinenalytics: The Science
2. V.K. Jain, Data Science & Analytics, Khanna Book Publishing, New Delhi of Dat
3. Data Science For Dummies by Lillian Pierson , Jake Porway