

Paper DSC 103: DATA-DRIVEN DECISION MAKING**Hours Per Week:** (3T+4P)**Credits:** 5**Exam Hours:** 1 ½**Marks:** 50T+35P+15I

Objective: To make students to learn data-driven decision making.

UNIT I: DISRUPTION:

Challenges: Identify hurdles to becoming a data-driven organization - Opportunities: Analyze data practices in the organization - Identify how data can benefit the organization - Distinguish how to be a proactive data practitioner

UNIT II: BUSINESS ANALYTICS PRE-REQUISITES:

Business Analysis Principles: Identify the categories of analytical people - Distinguish and define roles and responsibilities of professionals in data analysis - Data Driven Decision Making: Identify cultural barriers - Distinguish solutions to cultural and cross-functional barriers - Identify six steps of the data-driven decision-making model.

UNIT III: BUSINESS ANALYTICS ECOSYSTEM:

Relational Databases: Nature of relational databases - Purpose of the SQL language - Key aspects of ACID - Meaning of ETL - Not Only SQL: Big data and other data storage tools - Interacting with MongoDB - Document stores and graph stores - Big Data: Key functions of big data technologies - Utility of Hadoop - Purpose of MapReduce - Statistical Tool, Machine Learning, and Data Visualization: Tools for statistical analysis - Python and R - Purpose of machine learning - Visualization tools.

UNIT IV: DATA LIFECYCLE MANAGEMENT:

Data Life Cycle: Identify the stages in the data life cycle - Data in the organization: Distinguish between ways that data enters the organization - Identify the forms data takes as it is stored and used within the organization.

UNIT V: REQUIREMENTS GATHERING:

Requirements gathering process: Analyze why requirement gathering process is critical to proper analysis - 3 V's of data: Distinguish between the ways data is consumed (the three V's of data) - Customer journey map: Understand how requirement gathering fits with the development of a customer journey map - Distinguish between the stages of the customer journey map

SUGGESTED READINGS:

1. Data Analysis Fundamentals Certificate; AICPA
2. Fundamentals of Business Analytics, 2nd Edition; R N Prasad, Seema Acharya; Wiley
3. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
4. Monetizing Your Data: A Guide to Turning Data into Profit-Driving Strategies and Solutions; Andrew Roman Wells, Kathy Williams Chiang; Wiley
5. AI and Analytics, Accelerating Business Decisions; Sameer Dhanrajani; Wiley
6. Data Analytics with R; Bharti Motwani; Wiley.