21DS4T2i

P.B.SIDDHARTHA COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), VIJAYAWADA-520010

(An Autonomous College in the Jurisdiction of Krishna University, A.P., India.)

BUSINESS ANALYTICS

SYLLABUS W.E.F 2021-2022

Course Category: Programme Core **Course Type:** Theory **Credits:** 4 **Semester:** IV

Prerequisites: Statistical Techniques **Lecture-Tutorial-Practice:** 4-0-0

Continuous Evaluation: 30 **Semester end Evaluation:** 70 **Total Marks:** 100

Year of Introduction: 2021 **Percentage of Change:** Nil

Course Objectives:

1. To learn overview of *Big Data Analytics*.
2. To understand and implement *MongoDB* and *MapReduce*.
3. To understand analyze *Descriptive* and *Predictive Analysis*.
4. To understand *Prescriptive Analytics*.
5. To understand and implement *Emerging Trends* and *Future Impacts*.

Course Outcomes:

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

CO1: Learn overview of *Big Data Analytics*.

CO2: Understand and implement *MongoDB* and *MapReduce*.

CO3: Understand analyze *Descriptive* and *Predictive Analysis*.

CO4: Understand *Prescriptive Analytics*.

CO5: Understand and implement *Emerging Trends* and *Future Impacts*.

UNIT I (12 Hours)

Big Data Analytics:

Types of Digital Data (Structured, Unstructured and Semi-structured Data) - Big data from Business Perspective (Introduction of Big data, Characteristics of Big data, Data in the Warehouse, Importance of Big data) - Big data Use Cases (Patterns for Big Data Deployment, Big data Market Survey).

UNIT II (12 Hours)

Introduction to MongoDB and MapReduce Programming

MongoDB: Why MongoDB - Terms used in RDBMS and MongoDB - Data Types - MongoDB Query Language

MapReduce: Mapper - Reducer - Combiner - Partitioner - Searching - Sorting - Compression.

UNIT III (12 Hours)

Business Analytics- Descriptive and Predictive Analytics

Introduction Business Analytics: What and Why Business Analytics - Business Analytics Importance.

Descriptive Analytics: Data Warehousing - Business Reporting - Visual Analytics - Business Performance Management.

Predictive Analytics: Techniques for Predictive Modeling - Web Analytics - Web Mining - Social Analytics - Case Study.

UNIT IV (12 Hours)

Business Analytics- Prescriptive Analytics

Prescriptive Analytics: Case Study – Model Based Decision Making (Optimization and Multi-Criteria Systems).

Modeling and Analysis: Heuristic Search Methods and Simulation - Case Study.

UNIT V (12 Hours)

Business Analytics: Emerging Trends and Future Impacts

Opening Vignette - Location Based Analytics for Organizations - Analytics Applications for Consumers - Web 2.0 - Online Social Networking - Cloud Computing and Bl - Impacts of Analytics in Organizations - Analytics Ecosystem.

Prescribed Text Book			
S.No.	Author	Title	Publisher
1	MarcJ.Schniederjans,DaraG.Schniederjans,ChristopherM.Starkey	Business Analytics Principles, Concepts, and Applications	Pearson.2014.
2	R.Sharada,D Delen	Business Intelligence and Analytics	E. Turbon-Tenth Edition.
3	R.N.Prasad & Seema Acharya	Fundamentals of Business Analytics	Wiley Publications, 2nd Edition, 2016

Reference Text Book			
S.No.	Author	Title	Publisher
1	Frank J Ohlhorst	Big Data Analytics: Turning Big Data into Big Money	WileyandSASBusinessSeries,2012

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M.Sc.,(DATA SCIENCE) DEGREE EXAMINATIONS

FORTH SEMESTER

BUSINESS ANALYTICS

SYLLABUS W.E.F 2021-2022

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

Answer ALL questions **(10×2 = 20 Marks)**

1.a) What is *Structured Data*? (CO1,L1)
b) Write about Warehouse. (CO1,L1)
c) What is the Purpose of *RDBMS*? (CO2,L1)
d) What is *Data Type*? (CO2,L1)
e) What is *Business Analytics*? (CO3,L1)
f) What is *a Visualization?* (CO3,L1)
g) What is *a Model?* (CO4,L1)
h) State *Perspective Analysis*. (CO4,L1)
i) What is *Web 2.0?* (CO5,L1)
j) State the impact of *ADS system*. (CO5,L1)

Answer Five Questions Choosing One Question from Each Unit.

All Questions Carry Equal Marks. **(5×10 = 50 Marks)**

UNIT- I

2. a) Explain the characteristics of Big Data and Why Big Data is important ? (CO1,L2) 10 Marks

(or)

b) Explain *the Classification of Analytics*. (CO1,L2) 10 Marks

UNIT- II

3. a) List *various methods in MongoDb*. (CO2,L4) 10 Marks

(or)

b) Analyze *Parallel Breadth-First Search*. (CO2,L4) 10 Marks

UNIT-III

4. a) Apply *Business reporting and Visual Analytics for any organization.*(CO3,L3) 10 Marks

(or)

b) Identify and explain difference between *Web and Social Analytics*.(CO3,L3) 10 Marks

UNIT-IV

5. a) Illustrate *Structure Of Mathematical Models For Decision Support*. (CO4,L5) 10 Marks

(or)

b). Explain *Genetic Algorithm.* (CO4,L5) 10 Marks

UNIT-V

6. a) Discuss *Cloud Computing* and *BI* (CO5,L6) 10 Marks

(or)

b) Discuss *Analytics Ecosystem*. (CO5,L6) 10 Marks