Lesson Plan

Program:MBA **Semester: 3rd Course Code**:KMBN IT01   **Course Name:**Data Analytics for Business Decisions

Course Objectives

(CO1): Understanding the Role of Business Analyst and Data Science in Business.

(CO2): Understanding the basic concept of Data management

(CO3): To understand the basic concept of R Programming.

(CO4): To Understand the application of business analysis

(CO5): Understanding the basic concept of Data Science Project Life Cycle.

Session Duration: 60 minutes

Participants:

Entry level knowledge and skills of students

    i.   Data analytics, technical equipment, operation skills,

    ii.   Use of Digital tools, Problem Solving

Equipment required in Classroom/ Laboratory/ Workshop

    i.   LCD/Projector

    ii.   Whiteboard/ Black Marker

Assessment Schemes

S. No.	Criteria	Marks (150)
1	**AKTU End Term Examination**	100
2	**Internal Evaluation Scheme**	50
2(a)	**Class Tests**	30
2(a)(i)	Class Test-I	15
2(a)(ii)	Class Test-II	15
2(b)	**Teacher Assessment (Continuous Evaluation)**	20
2(b)(i)	Attendance	5
2(b)(ii)	Case Study/Topic Based Presentation	5
2(b)(iii)	*GD	10
	*MCQ Based Assignment	2

Course Outcomes (starting with action-oriented observable and measurable verb)

(CO1): Understand the basics of business analysis and Data Science

(CO2): Understand data management and handling and Data Science Project Life Cycle.

(CO3): Understand the data mining concept and its techniques

(CO4): Understand and Analyzing machine learning concept

(CO5): Understand the application of Business analysis in Different domain

L. No.	Topics	Sub Topics	Date of implementation	Pedagogy	CO-Covered	Faculty Sign	HoD's Remark with Date
			Unit - 1				
1.	Introduction	Wjhat is business analytics? Historical overview of Data analysis		Lecture	CO1		
2.	Introduction	Data Scientist Vs Data Engineer vs Business Analyst, Career in Business Analytics		Lecture	CO1		
3.	Introduction	What is Data Science, Why Data Science,		Lecture	CO1		
4.	Introduction	Application for Data Science, Data Scientist, Role and Responsibility		Lecture	CO1		
			Unit - 2				
5.	Data Analysis	Data Collection		Lecture	CO2		
6.	Data Analysis	Data Classification, Data Management		Lecture	CO2		
7.	Data Analysis	Big Data Management		Lecture	CO2		
8.	Data Analysis	Organization/Sources of Data		Lecture	CO2		
9.	Data Analysis	Importance of Data Quality		Lecture	CO2		
10.	Data Analysis	Dealing with noisy data		Lecture	CO2		
11.	Data Analysis	Dealing with missing or incomplete data, Outlier Analysis Method to deal outlier		Lecture	CO2		
12.	Data Analysis	Data Visualization					
			Unit - 3				
13.	Data Science Project Life Cycle	Business Requirement		Lecture	CO3		
14.	Data Science Project Life Cycle	Data Acquisition		Lecture	CO3		
15.	Data Science Project Life	Data Preparation		Lecture	CO3		

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No.	Topic	Sub-topic		Mode	CO		
	Cycle						
16.	Data Science Project Life Cycle	Hypothesis and Modeling		Lecture	CO3		
17.	Data Science Project Life Cycle	Evaluation and Interpretation		Lecture	CO3		
18.	Data Science Project Life Cycle	Deployment		Lecture	CO3		
19.	Data Science Project Life Cycle	Operations		Lecture	CO3		
20.	Data Science Project Life Cycle	Optimization		Lecture	CO3		
Unit - 4							
21.	Introduction to R and Visualization of Data	R Graphical user Interfaces		Lecture	CO4		
22.	Introduction to R and Visualization of Data	Data Import and Export, attribute and data type		Lecture	CO4		
23.	Introduction to R and Visualization of Data	Descriptive Statistics, exploratory data analysis		Lecture	CO4		
24.	Introduction to R and Visualization of Data	Visualization of Categorical Data in R		Lecture	CO4		
25.	Introduction to R and Visualization of Data	Visualization of Categorical Data in R		Lecture	CO4		
26.	Introduction to R and Visualization of Data	Visualization of Categorical Data in R		Lecture	CO4		
27.	Introduction to R and Visualization of Data	Visualization of Categorical Data in R		Lecture	CO4		
28.	Introduction to R and Visualization of Data	Visualization of Categorical Data in R		Lecture	CO4		
Unit - 5							
29.	Application of Business Analysis	Retail Analytics		Lecture	CO5		

30.	Application of Business Analysis	Retail Analytics		Lecture	CO5		
31.	Application of Business Analysis	Marketing Analytics		Lecture	CO5		
32.	Application of Business Analysis	Marketing Analytics		Lecture	CO5		
33.	Application of Business Analysis	Financial Analytics		Lecture	CO5		
34.	Application of Business Analysis	Healthcare Analytics		Lecture	CO5		
35.	Application of Business Analysis	Supply Chain Analytics		Lecture	CO5		
36.	Application of Business Analysis	Supply Chain Analytics		Lecture	CO5		
Revision							
37.	Presentation						
38.	Presentation						
39.	Revision of all Units						
40.	Revision of all Units						
41.	Revision of all Units						
42.	Revision of all Units						
43.	Revision of all Units						
44.	Revision of all Units						

Text Books:

1. Essentials of Business Analytics: An Introduction to the methodology and its application, BhimasankaramPochiraju, Sridhar Seshadri, Springer
2. Business Analytics: Albright & Winston Cengage
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Reference Books:

1. Business Analytics, Tanushri Banerjee & Arindam Banerjee, SAGE Publishing
2. Introduction to Data Science, Laura Igual Santi Segui, Springer

Journals:

1. Lemenkova, P. (2019). Statistical analysis of the Mariana Trench geomorphology using R programming language. *Geodesy and Cartography*, *45*(2), 57-84.

2. Fitzpatrick, A. M., Teague, W. G., Holguin, F., Yeh, M., Brown, L. A. S., & Program, S. A. R. (2009). Airway glutathione homeostasis is altered in children with severe asthma: evidence for oxidant stress. *Journal of Allergy and Clinical Immunology*, *123*(1), 146-152.

Electronic Database:

https://www.youtube.com/watch?v=7076ZuAwUn8&list=PLWPirh4EWFpEvN4ktS8LE0cvLCSfhD 55t

Software required

1. Microsoft Excel365
2. R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical, Computing, Vienna, Austria. URL https://www.R-project.org/.