



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSES CONTENT

BUSINESS ANALYTICS								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P	C	CIA	SEE	Total
CMBD28	Core	4	-	-	4	40	60	100
		Contact Classes: 45		Tutorial Classes: Nil		Practical Classes: Nil		Total Classes: 45
Prerequisite: Management Information Systems								

I. COURSE OVERVIEW:

The course intends to provide knowledge of basic concept of business analytics like data, data science and its challenges. This course is going to give at length exposure on different types of analytics like data warehousing and data marts, meta data and data transformation and also gives knowledge on data mining and text mining and text analytics and web mining and data simulation and automated decision systems gives exposure on the concepts of Hadoop, python, machine learning and artificial intelligence for the purpose of analysis and decision making in business.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. Data handling and business analytical tools that can be used for decision- making in an organization.
- II. The data warehousing concepts, data mining techniques.
- III. The relationships between the underlying Business Processes of an Organization.
- IV. Prescriptive Analytics and its types, and the various applications of business analytics on different domains.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Contrast on concepts, challenges and framework of business analytics for making effective business decisions.
- CO2 Demonstrate data warehousing architecture and data marts for reporting and performance measurement through visual analytics.
- CO3 Summarize the data mining, and text mining to extract information from the web, analyze weblogs, etc.
- CO4 Develop suitable system for web mining process to web analytics and easy access of data.
- CO5 Experiment with prescriptive analytics and its models to develop effective decision making support system.
- CO6 Distinguish the Finance, HR and Marketing analytics and big data technologies for applying them in their respective fields.

IV. COURSE CONTENT:

MODULE - I: INTRODUCTION TO BUSINESS ANALYTICS (08)

Introduction to Data, Importance of Analytics, Data for Business Analytics, Big Data, Business Analytics in Practice. Data Visualization, Data Visualization Tools, Data Queries, Statistical Methods for Summarizing Data, Exploring Data using Pivot Tables.

MODULE - II: DESCRIPTIVE STATISTICS ANALYTICS (10)

Population and Samples, Measures of location, Measures of Dispersion, Measures of Variability, Measures of Association. Probability Distribution and Data Modeling, Discrete Probability Distribution, Continuous Probability Distribution, Random Sampling from Probability Distribution, Data Modeling and Distribution fitting.

MODULE - III: PREDICTIVE ANALYTICS (09)

Karl Pearson Correlation Technique, Multiple Correlation, Spearman's Rank Correlation, Simple and Multiple Regression, Regression by the Method of Least Squares, Building Good Regression Models. Regression with Categorical Independent Variables, Linear Discriminant Analysis, One-Way and Two-Way ANOVA.

MODULE - IV: DATA MINING (10)

Scope of Data Mining, Data Exploration and Reduction, Unsupervised Learning, Cluster Analysis, Association Rules, Supervised Learning, Partition Data, Classification Accuracy, Prediction Accuracy, K-Nearest Neighbors, Classification and Regression Trees, Logistics Regression.

MODULE - V: SIMULATION (08)

Random Number Generation, Monte Carlo Simulation, What If Analysis, Verification and Validation, Advantages and Disadvantages of Simulation, Risk Analysis, Decision Tree Analysis.

V.TEXT BOOKS:

1. James E.Sallis, Geir Gripsrud, Ulf Henning Olsson, Ragnhild Silkoset, Research Methods and Data Analysis for Business Decisions: A Primer Using SPSS, Springer International Publishing, 1e, 2021.
2. Anil Maheswari, Big Data, Tata McGraw Hill, New Delhi, 2e, 2019. U. Dinesh Kumar, "Business Analytics", Wiley, 2017.
3. Laursen, Thorlund, "Business Analytics for Managers", Wiley, 2nd edition, 2017.
4. Sahil Raj, "Business Analytics", Cengage Learning, 3rd edition, 2015
5. Albright, Winston, "Business Analytics - Data Analysis and Decision Making", Cengage Learning, 5th edition, 2015.
6. Jac Fitz, Mattox II, "Predictive Analytics for Human Resources", Wiley, 3rd edition, 2015
7. Ramesh Sharada, Dursun Delen, Efraim Turban, "Business Intelligence and Analytics", Pearson, 10th edition, 2014.
8. Jean Paul Isson, Jesse S. Harriot, "Win with Advanced Business Analytics", Wiley, 1st edition, 2012.
9. Gert H.N. Laursen, Jesper Thorlund, "Business Analytics for Managers", John Wiley and Sons, Inc. 2010.

VI. REFERENCE BOOKS:

1. Artun, Levin, "Predictive Marketing", Wiley, 2nd edition, 2015.
2. R N Prasad, Seema Acharya, "Fundamentals of Business Analytics", Wiley, 2011.

VII. Web References:

1. <https://www.pdfdrive.com/business-analytics-for-managers-taking-business-intelligence-beyond-reporting-e167628994.html>

VIII. E-Text Books:

1. <https://www.pdfdrive.com/business-intelligence-and-analytics-e56416503.html>