

MBA(Agribusiness) Programme

Value Added Course (Offered in December-2021-Jan 2022)

DATA SCIENCE AND BUSINESS ANALYTICS

Time-30 Hours

Marks-100

Course Objectives:

In today's fast changing business environment organizations face significant challenges in making decisions that become fruitful. With loads of data available with the manager from various sources, namely, ERP, CRM and other firm specific internal data sources along with loads of qualitative data from social media, optimal data analysis and taking informed decisions based on the data threads is key to success. This course is meant to expose students to business analytics in general that aids managerial decision making, be it in the bank or in retail or manufacturing or in the finance function making investment decisions. This course is generic in nature targeting across areas of specialization. The students shall be exposed data analysis techniques and decision making to draw meaningful inferences from them. The course shall expose the students to usage of advanced applications of SPSS and data visualization techniques using MS Excel as well.

Learning Outcomes:

At the end of the course, the participants should 1. Be able use SPSS and MS Excel Solver for statistical analysis 2. Be able to define a business issue as an analytical problem. 3. Be able to choose from various analytical techniques in a given situation depending on the desired decision variable. 4. Be able to understand, interpret and recommend actions based on analytical output cutting across marketing, operations, finance and HR functions. 5. Hands on knowledge of SPSS ranging from Data entry, Descriptive statistics, Cross Tabulations, Regression (Bi Variate/ Multivariate/ Logit), Exploratory Factor Analysis, Cluster, etc.

Pedagogy:

The approach to the course shall be a mix of lectures, demonstration of data handling using MS Excel and SPSS statistical package using different techniques. In addition, live examples of consulting cases from real world based on instructor's experience shall also be shared to make the students abreast with the latest techniques of data science and modeling.

SESSION PLAN**December 15 – January 03 (2021-22)**

Day* Date	session 1 06:00 PM – 07:00 PM	session 2 07:00 PM – 08:00 PM
Day 1 15 Dec 21	Introduction Sesion With Speaker	Introduction to Data Science – Applications, Trends, and Data Types/ Scales; Role of Data Analytics
Day 2 16 Dec 21	Introduction to Data Science (Cont.)	Case: Netflix Leading with Data (HBSP)
Day 3 17 Dec 21	Introduction to statistics	Analysis and Interpretation of Descriptive Statistics and Cross Tabs
Day 4 18 Dec 21	Analysis and Interpretation of Descriptive Statistics and Cross Tabs (Cont.)	Hands on demo using SPSS with data sets and application in business
Day 5 20 Dec 21	Correlation & Regression Analysis	Article: How to put your data analysis to good use; Class notes
Day 6 21 Dec 21	Correlation & Regression Analysis (Contd.)	Article: How to put your data analysis practical cases; Class notes
Day 7 22 Dec 21	Hands on demo using SPSS/ MS Excel with data sets of Simple, Multiple and Logit regression and applications in business	Hands on demo using SPSS/ MS Excel with data sets of Simple, Multiple and Logit regression and applications in business (Contd.)
Day 8 23 Dec 21	Data Mining & Cluster Analysis – Types, Application	Data Mining & Cluster Analysis – Analysis and Interpretation
Day 9 24 Dec 21	Hands on demo using SPSS with data sets	Hands on demo using SPSS with application in business
Day 10 27 Dec 21	Predictive Modelling	Forecasting with business applications and cases
Day 11 28 Dec 21	Chapter 8, 10 of James Evans (Business Analytics)	Hands on in MS Excel/ SPSS

*Each session is of 60 minutes

Day 12 29 Dec 21	Application of Data Analytics in Channel Management	Case: CDK Digital Marketing – Addressing channel conflict with data analytics (HBSP)
Day 13 30 Dec 21	Linear Optimization Models in Finance, Manufacturing	Linear Optimization Models in Marketing & HR
Day 14 31 Dec 21	Class Notes; Chapter 13, 14 of James Evans (Business Analytics)	Hands on in MS Excel/ TORA software
Day 15 03 Jan 22	Recap of course and doubt clearance	Class interaction & class notes

*Each session is of 60 minutes