



Dr. V. N. Bedekar Institute of Management, Thane
Teaching Plan (MMS)
Academic Year (2019-2020)

Programme Name: MMS Semester: I Period: 1 AUG-31-OCT

Course Code :MMS-1-C-03

Name of the subject: Business Statistics Maximum marks: 100 (60+40)

No. of Sessions: 14

Name of the Faculty: Dr, Meenakshi Malhotra

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Program Outcomes (PO)	Course Outcomes (CO)
1. Leadership: Nurture leadership skills, team-membership skills and mutual trust. 2. Decision Making: Demonstrate decision-making ability. 3. Technology: Ability to develop culture of technology-usage. 4. Social Sensitivity: Inculcate social sensitivity among students. 5. Analytical Problem Solving: Integrate and apply business knowledge and management techniques for problem-solving / analytical skills.	Understand and recognize the statistical techniques and tools used in Business. Apply the business statistics tools for business research. Infer the decision support provided by the analysis technique.

Reference Books:

1. Business Statistics, C Beri, Mc Graw Hill (R1)
2. Statistical Methods, S. P. Gupta, Sultan Chand & Sons (R2)
3. Business Statistics – Making Better Decision Making, Ken Black, Wiley (R3)

A. Plan:

<u>Sessio n No.</u>	<u>Pl. Date</u>	<u>Topic</u>	<u>Ref. Study Material</u>	<u>Course Outcomes</u>
<u>1</u>		Revision of Data Representation	R1: Chap 4, 5 PPT Website https://www.mathsisfun.com/data/index.html Case: Container Shipping Companies: Displaying data decision dilemma	Construct different type of data graph and chart, in order to interpret the data being displayed
<u>2</u>		Central Tendency	R1: Chap 6 PPT Website http://www.quickmba.co	Apply and infer various measures of central tendency including mean, median, mode.



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			m/stats/centralten/ Case: Statistics in Practice: A case of Small Fry Design (Before Class) Short Case: Business Travel (Effect of the variability on the data)	
<u>3</u>		Dispersion	R1: Chap 7 PPT Website: https://www.statisticshowto.datasciencecentral.com/dispersion/ Case: Deciding the range of the stock movement based on standard deviation.	Apply and infer various measure of variability including range, variance and standard deviation
<u>4</u>		Kurtosis and Skewness	R1: Chap 8 PPT Website: https://www.spforexcel.com/knowledge/basic-statistics/are-skewness-and-kurtosis-useful-statistics Caselets	Calculation of Skewness and Kurtosis and differentiating it from standard deviation
5		Probability- Axioms, Addition and Multiplication rule, Types of probability, Independence of events, probability tree, Bayes' Theorem	R2: CHAP 1 VOL II PPT Case: Equity of Sexes in the Workplace	Calculate probabilities using general law of addition, Joint probabilities and conditional probabilities using Bayes law
6		Concept of Random variable, Probability distribution, Expected value and variance of random variable, conditional expectation, Classical News Paper boys problem(EMV, EVPI)	R1: CHAP 22 PPT Caselets	Understanding and apply expected value and utility as decision criteria
7		Probability distributions Binomial, Poisson, Normal	R2: CHAP 2 VOL II PPT Case: Life with a cell	Recognizing and Solving problems by using binomial, normal and



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			phone	poisson distribution
8		Sampling distribution	R1: CHAP 11 Case: What is the attitude of Maquiladora Workers	Determining the sample of study
9		Estimation- Point estimation Interval estimation Hypothesis testing	R2: CHAP 12 Case: Online shopping	Develop both one and two tailed null and alternative hypothesis that can be tested in a business setting
10		Students t	R2: CHAP 3 VOL II Case: Online shopping	Estimate the population mean with an unknown population standard deviation using the t statistics
11		Chi square, Z	R2: CHAP 3, 4 VOL II Case: Online Stock Trading: Do Demographics, Internet Usage, and Attitudes Matter?	Use the chi square distribution to estimate the population variance given the sample variance
12		Analysis of variance- one way, two way	R2: CHAP 5 VOL II Case: Burke Marketing Services (Statistics in Use)	Compare the two population means using analysis of variance
13		Correlation Analysis and significance	R1: CHAP 16 Case Study: Predicting International Hourly Wages by the Price of a Big Mac	Calculating and interpreting the Pearson product moment correlation coefficient to determine if there is a correlation between two variables
14		Regression Analysis and significance	R1: CHAP 17 Case Study: Predicting International Hourly Wages by the Price of a Big Mac	Interpretation of regression analysis and understanding the concepts of independent and dependent variables

B. Practical Approach: Other activities

Sr. No.	Activity Name	Topic Covered	Learning outcomes	Source
1	Case study	Correlation Regression, Data	To apply	R3



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		Representation, Sampling, Hypothesis setting and Chi Square test	theoretical concept practically	
2	Academic Projects	Students will be provided with a structured questionnaire for which they will be required to collect data and perform the descriptive analysis	To provide practical exposure for data analysis	CRISIL, Ticker plant, ProQuest
3	Business Quiz /MCQ	Central Tendency, Dispersion, probability, Statistical test	To know the basic understanding of the students	Self
4	Videos / Simulation	Probability, Sampling	To have better understanding of the topic	Youtube
5	Use of Software and Labs	Excel for statistical test	Use of technology	Excel

C. Innovative pedagogy adopted:

Students will be provided with a structured questionnaire for which they will be required to collect data and perform the analysis based on objectives. This Academic project will help them to have a live experience with the data and analyse it with the help of the statistical test. This will help in increasing their analytical skills and decision making.



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Prepared by:
Faculty

Reviewed by:
Specialisation

Approved by:
ADC

Date:

Date:

Date:

A. Execution:

<u>Session No.</u>	<u>Actual Date</u>	<u>Topic Covered</u>	<u>Attendance %</u>	<u>Evaluation Method</u>	<u>Case Study Ref.</u>	<u>Quiz Ref.</u>	<u>CR Sign</u>

B. Evaluation:

Component	Details	Marks
Project & Viva	Mandatory	5+5
Class Test (3 for MMS)	Mandatory (MCQ, Descriptive,. Etc)	20
Assignments / Others	Mandatory	5
Participation/Attendance	Mandatory	5
Final Exam	Mandatory	60



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C. Student Performance Analysis:

<u>Avg. Attendance</u>	<u>Avg. Internal Marks</u>	<u>% Failed in Internals</u>	<u>Avg. Final Marks</u>	<u>% Failed in Final</u>	<u>No. of best students > 80%</u>	<u>No. of students needs improvement</u>

D. Attainment:

	CO1	CO2	CO3
PO1			
PO2			✓
PO3	✓	✓	
PO4			
PO5		✓	

Comments / Suggestions / Recommendations:

Suggestions (if any) to students on subject related Certificate/Diploma or Add-on program: -
Advance Training in Microsoft Excel (Offered by DR VN BRIMS)

Signature of Faculty

Signature of the Co-ordinator / ADC