

UNIVERSITY OF MADRAS

MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE PROGRAMME SYLLABUS WITH EFFECT FROM 2023-2024

Subject Code	Subject Name	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
434C1B	Quantitative Techniques and Research Methods in Business	Core	3	1	-	-	4	60	25	75	100
Course Objectives											
C1	To provide the students with an introduction to probability theory and discuss how probability calculations may facilitate their decision making.										
C2	To construct a coherent research proposal that includes an abstract, literature review, research questions, ethical considerations and methodology.										
C3	To understand the basic statistical tools for analysis & interpretation of qualitative and quantitative data.										
C4	To recognize the principles and characteristics of the multivariate data analysis techniques.										
C5	To become familiar with the process of drafting a report that poses a significant problem										
SYLLABUS											
UNIT	Details							No. of Hours	Course Objectives		
I	Introduction: Probability - Rules of probability-Probability distribution; Binomial, Poisson and Normal Distributions, their applications in Business and Industrial Problem- Baye’s Theorem and its applications - Decision Making under risk and uncertainty; Maximax, Maximin, Regret Hurwitz and Laplace Criteria in Business and Decision Making - Decision tree.							17	C1		
II	Research Methods: Research - Definition - Research Process - Research Design – Definition- Types Of Research Design - Role of Theory in Research - Variables in Research – Objectives - Hypothesis - Types of Data; Preliminary Vs Secondary- Methods of Primary Data Collection; Survey, Observation, Experiments - Construction Of Questionnaire - Questionnaire Schedule- Validity and Reliability of Instruments - Types of Scales; Nominal, Ordinal, Interval - Types of Attitude Measurement Scales – Sampling Techniques; Probability And Non probability Techniques- Optimal Sample Size determination.							10	C2		

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III	Data Preparation and Analysis: Data Preparation - Editing –Coding- Data Entry- Data Analysis- Testing Of Hypothesis Univariate and Bivariate Analysis - Parametric And Nonparametric Tests and Interpretation of Test Results- Chi-Square Test- Correlation; Karl Pearson’s Vs Correlation Coefficient and Spearman's Rank Correlation- Regression Analysis - One Way and Two Way Analysis of Variance.	15	C3
IV	Multivariate Statistical Analysis: Exploratory and Confirmatory Factor Analysis -Discriminant Analysis- Cluster Analysis -Conjoint Analysis -Multiple Regression- Multidimensional Scaling- Their Application In Marketing Problems -Application of Statistical Software For Data Analysis- SEM Analysis	09	C4
V	Report Writing and Ethics in Business Research: Research Reports- Different Types -Report Writing Format- Content of Report- Need For Executive Summary- Chapterization -Framing the Title of the Report- Different Styles Of Referencing -Academic Vs Business Research Reports - Ethics In Research.	09	C5
	Total	60	
Course Outcomes			
Course Outcomes	On completion of this course, students will;	Program Outcomes	
CO1	Be able to develop problem-solving techniques needed to accurately calculate probabilities.	PO1, PO2, PO6, PO7	
CO2	Be able to devise research methods, techniques and strategies in the appropriate manner for managerial decision making and conduct research for the industry.	PO4, PO6	
CO3	Be able to apply and interpret the different types of quantitative and qualitative methods of data analysis.	PO4, PO6	
CO4	Be able to use multivariate techniques appropriately, undertake multivariate hypothesis tests, and draw appropriate conclusions.	PO4, PO6	
CO5	Be able to present orally their research or a summary of another’s research in an organized, coherent, and compelling fashion.	PO4, PO6	
Reading List			
1.	https://www.dartmouth.edu/~chance/teaching_aids/books_articles/probability_book/amsbook.mac.pdf		
2.	https://study.com/academy/topic/probability.html		
3.	https://onlinecourses.nptel.ac.in/noc18_ma07/preview		
4.	https://hbr.org/1964/07/decision-trees-for-decision-making		

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References Books	
1.	Kumar, R., Research Methodology: A Step-by-Step guide for Beginners, Sage, South Asia, 4th Edition, 2014.
2.	Srivastava, T.N. and Rego, S., Statistics for Management, 2nd Edition, Tata McGraw Hill, 3rd Edition, 2016.
3.	Cooper, D.R., Schindler, P. And Business Research Methods, Tata- McGraw Hill, 12th Edition, 2012.
4.	Cooper, D.R., Schindler, P. and Sharma, J.K., Business Research Methods, 11th Edition, Tata-McGraw Hill, 12 th Edition, 2018.
5.	Johnson, R.A., and Wichern, D.W., Applied Multivariate Statistical Analysis, PHI Learning Pvt. Ltd., 6 th Edition, 2012.
6.	Anderson, Sweeny, Williams, Camm and Cochran, Statistics for business and Economics, Cengage Learning, New Delhi, 13th Edition, 2017

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	3				3	3	
CO 2				3		3		
CO 3				2		2		
CO 4				2		2		
CO 5				2		3		

3-Strong

2-Medium

1-Low