

Statistics

F.Y.B.COM Semester-II
Statistics for Business (Minor) - Credit 4

Objective:

OBJECTIVE

The main objective of this course is to provide fundamental knowledge of probability, mathematical expectation and use of probability distribution. The purpose is to make the students aware about the concept of probability and its application in mathematical expectation and probability distributions.

Course Outcome:

CO1	Understand the basic concept of probability and its uses for advance study.
CO2	Understand the basic idea about how to utilize the concept of probability to find expected value of a random variable.
CO3	Understand basic concept of probability distribution and its application.
CO4	Understand basic terminology about discrete and continuous variable.
CO5	Apply the course content for the further study of statistics.

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Sr.No.	Course Inputs (As per UGC Model Curriculum)	Weightage	Marks
Unit - 1	Probability: ➤ Probability as a concept: Random experiments, Sample space, Events, mutually exclusive events, Exhaustive event, equally likely event, Independent events the three approaches for defining probability, Addition and Multiplication laws of probability; ➤ Conditional probability	20%	10
Unit-2	Mathematical Expectations: ➤ Random variable: Discrete and Continuous ➤ Expectation of a function for discrete random variable ➤ Properties of Mathematical expectation (without proof) ➤ Expectation of a linear combination of random variable for discrete case only (no proof required) ➤ Mean, variance and covariance in terms of expectation (up to two variables only), some exercises related to discrete random variables.	30%	15
Unit-3	Discrete Probability Distribution: ➤ Concept of Probability distribution ➤ Binomial, Poisson and Hyper geometric distribution, - their properties and their applications	30%	15
Unit-4	Continuous Probability Distribution: ➤ Properties of Normal distribution ➤ Normal distribution, Exponential Distribution and their Application	20%	10
	Grand Total	100%	50

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Reference Books:		
1.	Goon A.M., Gupta M.K. and Dasgupta B. (2000):	Fundamentals of Statistics, Vol. I & II, 8 th Edn. The World Press. Kolkata.
2.	Miller, Irwin and Miller, Marylees (2006):	John E. Freund's Mathematical Statistics With Applications, (7 th Edn.), Pearson education. Asia.
3.	Mood, A.M. Graybill, F.A. And Boes, D.C. (2007):	Introduction to the theory of Statistics, 3 rd Edn.,(Reprint), Tata McGraw-Hill Pub. Co. Ltd.
4.	Pavate D.C. Bhagwat	The Element Calculus : Popular Prakashan, Bombay
5.	Gupta S.P	Statistical Method : S. Chand & Co., New Delhi
6.	Rohtgi V.K.	An Introduction to probability theory and mathematical statistics : Wiley EstemLtd.
7.	S.C. Gupta & V.K. Kapoor	Fundamentals of Mathematical Statistics : S. Chand & Co., New Delhi
8.	Prof. H.D. Shah	ગાણિતિકઆંકડાશાસ્ત્ર ,યુનિવર્સિટી ગ્રંથનિર્માણ બોર્ડ- અમદાવાદ , ગુજરાત
9	ડો.આર.એસ.પટેલ	સંશોધન માટે આંકડાશાસ્ત્રીય પ્રયુક્તિઓ - Jay Publication
10	Dr. R T Ratani	પ્રયુક્ત આંકડાશાસ્ત્ર, ગુજરાત યુનિવર્સિટી ગ્રંથનિર્માણ બોર્ડ- અમદાવાદ , ગુજરાત
11	M.C.Jayswal(1974)	અર્થ વિષયક આંકડાશાસ્ત્ર, યુનિવર્સિટી ગ્રંથ નિર્માણ બોર્ડ - અમદાવાદ, ગુજરાત.
12	B L Agarwal	Programmed Statistics, Third Edition

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